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THE WORK MOTIVATION OF THE INDUSTRIAL SUPERVISOR

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ABSTRACT

The study examines the effect of role ambiguity as experienced by production supervisors, upon their attitudes to work and investigates the supervisory role with reference to perceptions of managers and supervisors. Role ambiguity is considered by several theorists to have a negative influence upon work attitudes generally. The study aims to identify which work attitudes are most significantly influenced and how much the presence and level of role ambiguity explains the variation in levels of motivation of supervisors.

The sample of supervisors and managers for the pilot study was drawn from 3 manufacturing organisations in the food industry, the main study relies on a sample of supervisors and managers from 6 organisations.

Whilst the major research objective has been to examine the effect of role ambiguity upon supervisors' attitudes, a significant element of the research has been directed towards clarification of the supervisory role, investigating such commonly-quoted situations as the supervisor as the "man in the middle" who suffers more than others in the organisation from role ambiguity.

The practical outcomes of the research are presented with reference to their use and potential value in an organisational context. The findings of the study indicate significant relationships in 5 out of the 6 predicted associations comprising the hypotheses. The theoretical model which has been developed lacks power as an explanatory instrument. The model is useful, however, as a descriptive tool, relating some of the variables which are associated with supervisors' work motivation.

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I can now confirm my original ideas about supervisors. Although existing theory cannot prove the causal relationship between supervisory behaviour and subordinate productivity, personal experience provides sufficient support for my belief that my supervisor has significantly influenced the successful completion of this study. Consistently supportive and encouraging, Sue Vinnicombe has succeeded in motivating me when I was at the bottom of the energy hill.

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PREFACE

The main theme of the current study has been to identify the factors which exert a significant influence upon the work motivation of the Industrial Supervisor and to contribute to a further clarification of the supervisory role.

Managers commonly describe the motivation of their supervisors as inadequate or poor and the author has attempted to isolate aspects of the supervisory work system which may be responsible. One such aspect is suggested to be the level of role ambiguity experienced by supervisors in their work role.

The author's initial interest in the subject was stimulated by his first-hand experience in the role of production supervisor with a food manufacturer. The food manufacturing sector of industry has been selected as the setting in which the research is performed. There were several reasons for selecting this sector. Firstly, this sector has received relatively little research attention in comparison with other areas of industry (coal, steel, and engineering industry). Secondly, the interpretation of research findings may be enhanced by the author's understanding of the organisational context. Finally, the progress of organisational entry may have been improved by the author's previous experience in the industry.

The first chapter presents a review of literature concerning the three areas considered to be most relevant to this study. They include a review of research concerning the Industrial Supervisor, a review of the last fifteen years of research concerning the development of theories of work motivation, and a discussion of the importance of the concept of role perceptions (particularly, role ambiguity) as a component of work performance models.

Whilst the theory of work motivation and its development is reviewed, aspects of motivation theory per se are not tested in this study. Patchen's conceptualisation of motivation, the individual's desire to expend energy on the performance of work tasks, is employed as an appropriate research definition for motivation.

Resulting from a review of results of the pilot study, Patchen's measure is subsequently developed to improve scale reliability. Other aspects of motivation theory, such as the concept of individuals' needs and the influence of perceived characteristics of the job (e.g. role ambiguity, authority, responsibility), are recognised in the theoretical model as important concepts.

The approach towards motivation adopted in this study focuses upon the relationship between motivation and effort applied to task performance. Due mainly to the difficulty which researchers have encountered in operationalising the concept of effort, a measure of motivation has been selected by the author which comprises an instrument to determine an individual's desire to expend energy, and therefore apply effort, in the performance of his work tasks.

CHAPTER ONE

REVIEW OF LITERATURE RELEVANT TO THE CURRENT STUDY

1.0 Introduction

The overall aim of this chapter is to introduce and review those areas of development in research concerning organisational behaviour considered by the author to be relevant to this study. They consist of:

1. A review of research concerning the role of the industrial supervisor/foreman;
2. A review of motivation theory; and
3. A discussion concerning the importance of role perceptions in work performance models.

The first two sections of the review concern research associated with the role of the supervisor and the importance of an individual's perceptions of his role. These two subjects become closely connected when considering the large quantity of research data that has been generated in the area of the role perceptions (often including role conflict) of the industrial supervisor or foreman. As Dunkerley (1975) has pointed out, the supervisor's role has undergone, and is undergoing, rapid change in terms of activities and responsibilities. Illustrative of this change has been the decision of some industrial firms to abolish the role of the traditional foreman in their organisations.

With reference to work motivation, the current state of the theory is apparently one of deficiency, where no unifying or

general theory of motivation exists to explain the volume of existing research data in the field. However, several theoretical approaches have been presented, and subsequently supported, which serve to explain much of the research information resulting from studies of motivation. These theories include need theory, equity theory, expectancy theory, and the job characteristics model. Although this study is not designed to test any one particular aspect of motivation theory, it does include the concepts of job motivation (from the viewpoint of devotion of energy to job tasks) and recognises the individual variability of need strength which may act as a mediator between role ambiguity and work motivation (here the need for role clarity).

Although the review of motivation theory will be confined to a discussion of the development of motivation theory over the past fifteen years, it should be remembered that one of the most systematic analysis of motivation (which is not discussed here) both from a theoretical and empirical viewpoint, has been provided by Drive theory. Although the popularity and acceptance of this theory amongst academic researchers has declined since its most popular period (1940-60), it still remains one of the most widely recognised of motivation theories. Its decline can perhaps be largely explained by the fact that it could not adequately account for the multitude of data that have been generated by research. This criticism could also be addressed to subsequent theoretical formulations and the fate of Drive theory may be an indicator for the future of the more recent theoretical approaches.

1.1 The Role of the Industrial Supervisor

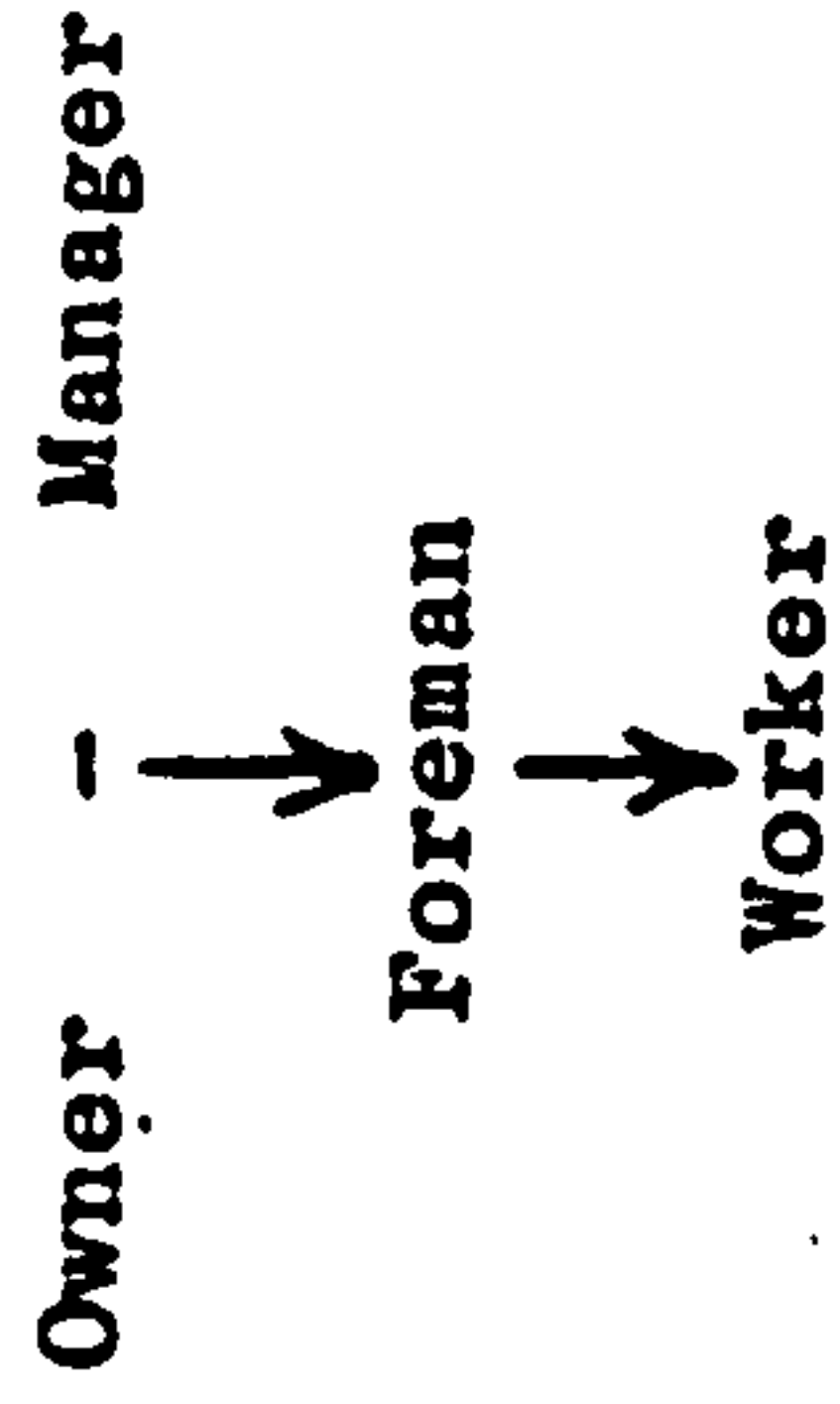
The review that follows is concerned with a summary of research studies and developments that have taken place regarding the role of the production supervisor.

The role of the first-line production supervisor has undergone extensive change over the last 60 years and may be seen as a reflection of the degree of industrial development that has occurred. Previously, the supervisor exercised a great deal of control over labour and enjoyed a relatively unambiguous relationship with his superiors. The situation today, however, indicates that supervisors are often further removed from the levels at which decisions affecting the shop floor and departmental work are made. The current culture of professionalism largely excludes the supervisor, who, in many instances, possesses no formal qualifications. He may also be often excluded from the promotional ladder which is accessible to other, more qualified, members of the junior management team.

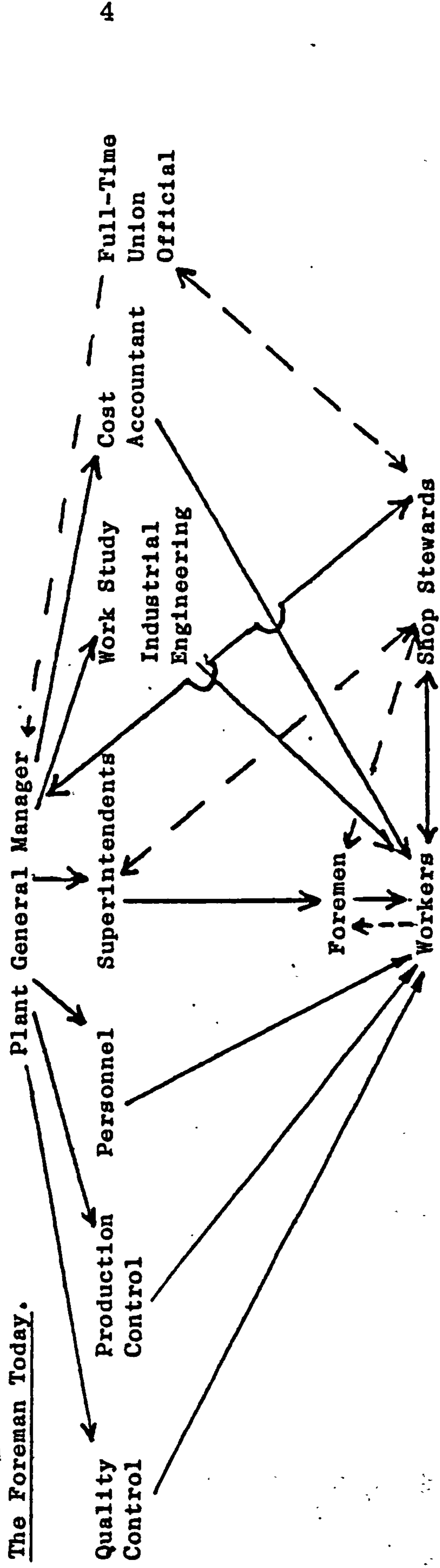
The supervisory role had changed sufficiently for Roethlisberger to suggest in 1945, that the industrial supervisor had become the "man in the middle", who has to deal with the often conflicting demands of management and workforce. Wray (1949) offered the view that supervisors were "marginal men" occupying a position on the boundary between management and labour in some kind of "organisational limbo". More recently, Child (1975), who had extensively examined the supervisory role in the U.K., investigated the supervisor in terms of his contemporary work setting and contrasted this with the situation 60 years ago. Figures 1A and 1B illustrate the relative change in the organisational position of the supervisor.

Fig. 1 CHANGE IN THE ORGANISATIONAL ROLE OF THE INDUSTRIAL SUPERVISOR (Source: Child, 1975)

(A) The Foreman-in-Charge.



(B) The Foreman Today.



Instruction or procedures pass down from specialist departments.

Grievances pass up, and information passes down between workers, stewards and higher management.

In much of the previous literature regarding the subject of supervisors, researchers have tended to focus their attention upon the supervisor-subordinate relationship and the effects of the supervisor's behaviour upon subordinate performance. (Katz and Kahn, 1953, Fleischman et al, 1955; Westerlund and Stromberg, 1965, Fiedler, 1967 and Lennerlof 1968). This can be seen as a downward looking view (from the supervisor's position in the organisation). Scant attention has been devoted to the alternative perspective, that is, viewing the supervisory role looking upwards. If the supervisor's relationship with higher level management is examined, this would serve to highlight such factors as the responsibilities and authority which are delegated to him and the priorities which are set for the supervisor in terms of work objectives.

Today, changes in the socio-industrial environment continue to affect the role of the supervisor, particularly with respect to his authority to direct, control and discipline employees. He must now operate within the framework of complex legislation, regarding such issues as unfair dismissal, race relations, health and safety at work and other aspects of industrial relations. Other significant changes which have taken place and have affected the work environment of the supervisor are the increase in specialist departments in organisations (e.g. industrial engineering, quality control, production planning and control, personnel and industrial relations), the growth of power and influence of trade unions, technological changes, the introduction of new work methods, changes in the status of manufacturing industry generally, and the production function specifically.

Certainly, much previous research into supervisory behaviour has taken place in the United States, and the state of existing theory in the behavioural sciences owes much to the

results of research performed there. However, whilst both U.K. and U.S. research results are cited in this study, the work which specifically refers to the role of the production supervisor in a U.K. industrial context (for example, the work of Child and Partridge, Fletcher, Hill and the NIIP) is of perhaps more immediate relevance in the current research. However, Fores et al 1978, does refer to the Anglo-American supervisory problems as common to both cultures and compares the Anglo-American first-line supervisor and his work situation with his West German counterpart.

Fletcher (1969) refers to the 'role strain' experienced by supervisors and suggests that there are several factors at work which explain supervisory conflict. The main implication of Fletcher's results, in common with those of the NIIP (1957) and Child (1982) is that there is no single pattern of factors which can explain supervisory conflict, and indeed, there is no single pattern of supervisory conflict. Both Child and the NIIP report the 'unwisdom' of making general comments concerning the reasons for the existence, or even the existence of, types of supervisory behaviour which may be applicable to all supervisors. Fletcher is concerned with the accuracy of the 'men in the middle' thesis and suggests that it has been oversimplified. His results showed hierarchical, departmental and individual variation in supervisory conflict and that it 'varied with the extent to which the supervisor saw himself as a manager with management problems or as a foreman with operative problems'. He found that supervisory conflict increased with supervisors' proximity to management, the closer to the executive by position or identity, then the greater the conflict. The theme of feelings of proximity to management is addressed in the current study and is addressed during discussions with supervisors on the subject of 'group orientation' and 'allegiance'.

The NIIP studied the role of the foreman in British factories between 1954 and 1956 and investigated 7 groups of supervisors. The main theme of the research was to examine supervisory responsibilities, the relationship between supervisors and line managers and specialist departments, and discover the attitudes of supervisors towards how they 'fit' into the organisation. The seven case studies were drawn from 6 different industries, the plants varying in size from 150 to over 3,000. The overall conclusions of the study, whilst differing from site to site, showed the overall importance of the supervisors relationships with managers. To the supervisor, these relationships appeared to be much more important than his relationship with workers. The study found that:

"The official duties, rights and status of the foremen were determined by the formal organisation but his freedom of action and participation in management may be determined largely by his personal relations with managers".

Inter- and intra-organisational identity of managers was also cited as an influence upon supervisors. The personal relations between supervisors and managers were affected by the fact that managers tended to be relatively transient in the occupation of their role in comparison with supervisors. The study identified this situation with the general problems associated with supervisors accepting change.

With respect to group orientation, the foremen in the NIIP study "did not feel that they were members or part of management." In addition, the sample of supervisors did not closely identify with their workers.

Growth of the supervisory role in terms of declining responsibility and status was found to be quite common and "only in the plant where senior managers were making conscious

efforts to strengthen the forman's position, did foremen not feel their status was endangered.

In the social science literature concerning supervisors in industry, there often appears to have been a markedly uneven analysis. The main research focus has been to find a solution to the problem of supervisors' "effectiveness", which is commonly defined in terms of those aspects of the supervisor's behaviour which are considered to positively influence subordinate performance. For example, much has been written about leadership styles and the function of supervision (Dubin et al, 1966) but relatively little regarding an explanation of supervisors' behaviour. This has occurred despite the finding of one of the most intensive studies of organisational roles (Kahn et al 1964), which suggested that immediate superiors are of overwhelming importance in comparison with other groups.

The supervisors' job has become increasingly one of supervising men as his other functions are adopted by other parts of the organisation (e.g. production planning, quality control), and it is the nature of his man-management role which can create conflict and ambiguity in terms of incompatible (and often unclear) demands from both management and workers. Kahn et al (1964) describes ambiguity in the following terms:

"The single or multiple roles which confront an individual may or may not be clearly articulated in terms of behaviours or performance levels expected (this) situation is referred to as one of role ambiguity".

The ambiguity of the supervisor's role can be illustrated by the often-cited erosion of the authority and status of the supervisor which can lead to feelings of powerlessness and uncertainty in dealing with those issues his superiors feel

are his responsibility and within his power to influence (Bowey 1973, Kanter 1979). The occurrence of feelings of uncertainty may be explained by the apparent difference between the supervisor's role perceptions and the role perceptions of his superiors. A study by Boyd and Jensen (1972) has illustrated that such a difference in perceptions (in this case perceptions of the supervisor's authority) is common. However, a more recent study by Partridge (1979) in two British manufacturing companies presented somewhat contradictory evidence to the Boyd and Jensen findings. In his study, Partridge found that perceptions of supervisory responsibility and influence as seen by supervisors and their managers, were in close agreement. Partridge concludes, however, that the pattern of responsibilities and influence of supervisors, and therefore the way the supervisory role is defined, depends upon the formal interaction between the supervisor and his manager. This would suggest that the supervisory role is sometimes not "organisationally" defined, but is rather the outcome of an ongoing informal negotiation process between the supervisor and his manager.

Hill (1976), refers to the existence of role ambiguity when discussing the results of his study of the role of dock foremen. He found that there was some ambiguity surrounding the expected role behaviour of foremen and that this was centred on the lack of information available for successful task performance. Hill described the dock foreman's role as "marginal" as "both in their firms and in their occupation, their work situation appears to differ from those of the men and their managers, and they view themselves as a group separate from others". Hill concludes that modern industry employs an "intermediate staff", who are neither managers nor workers and whose social and organisational positions are ambiguous.

In 1976, a BIM working party reported on an examination of front line management, including a sample of over 300 manufacturing companies, and made recommendations on how the effectiveness of front-line managers could be improved. The report concluded that companies needed to examine their management policies concerning supervisors in the areas of recruitment, selection, training, development, role definition, and motivation.

As early as 1949, Wray confirmed one commonly-held belief amongst managers when he expressed the view that if management could motivate the supervisor, he would in turn motivate his subordinates. This belief contained an implicit acceptance of the relationship between supervisors' motivation and behaviour, and worker motivation and performance (often measured in productivity terms).

Weger (1971), in his book "Motivating Supervisors", assumed that the morale of employees in a department was a sound measure of the supervisor's morale. This would seem to ignore the influence of additional variables such as the supervisor's relationship with his superiors and subordinates, and the influence of subordinate attitudes and behaviour upon the supervisor.

Thurley and Wirddenius (1973) question the relevance and effectiveness of much previous research concerning supervisors due to its apparent lack of impact. They see many previous research approaches as failing to recognise the complex system of pressures acting upon the supervisor. However, Lennelöf (1968), attempted to incorporate many aspects of the supervisory system when he investigated four major types of variables in his analysis of the supervisory role. They were:

1. Aspects of the supervisory work situation;

bes that the apparent lack of agreement between the supervisor and management regarding the definition of the supervisor's role may be a result of poor (or no) consultation, even assuming there exists a job description for the supervisor.

There is some support (Sasser and Leonard, 1980) for the view that when supervisors are consulted and given responsibility for important decisions, they will work more effectively with management. The BIM report recommends that the supervisor should be involved in the resolution of grievances, disciplining, and decisions concerning working conditions.

With reference to role studies which have relevance to the supervisor, Kahn et al (1964) describe some supervisory tasks as "boundary-spanning" in that they involve moving across organisational boundaries at different levels. They propose that, as a result of their research, such boundary-spanning activities would be more conducive to role conflict and ambiguity than non-boundary-spanning tasks, as they involve activity in areas which are more unfamiliar and uncertain. Keller, Szilgyi and Holland (1976) found that their sample of supervisors, unlike their sample of managers and engineers, did respond according to the Katz et al theory: that is, their boundary-spanning activities were highly related to role conflict and role ambiguity.

The lack of clarity surrounding the supervisor's role (ITRU Report 1978), and the difference in role perceptions between the supervisor and his superior both suggest that role ambiguity may be a common characteristic of the supervisor's job. Child (1982) reports that two-thirds of his sample of supervisors in manufacturing companies in the Midlands experienced ambiguity about what they were expected to do in their jobs. Approximately half of the supervisors were con-

2. Individual characteristics of the supervisor;
3. Supervisor work behaviour;
4. Effects of supervisor work behaviour.

Lennelöf's contribution seems to be that he has shown correlations between variables in the above 4 areas which emphasise the importance of variation in the environment and differing individual characteristics in determining supervisory behaviour.

Often research studies have tended to draw a boundary line around the supervisor and his immediate subordinates and superiors. Several studies have attempted to measure the effects of leadership behaviour upon the performance of the supervisor's subordinates. In practice, particularly in highly bureaucratic organisations with well-defined employee reward/incentive systems, the supervisor may have very little opportunity to influence the performance of his subordinates in many work areas. Westerlund and Stromberg (1965) have also made this point. They suggest that both supervisors and workers are engaged in collective tasks as part of the corporate system, and both are vulnerable to inputs from the total organisation (such as company policy changes, organisation development, technological change). The often limited influencing ability of the supervisor described by Westerlund and Stromberg is consistent with Kanter's suggestion concerning the powerlessness of the Supervisor. Additional research concerning the supervisor in the U.K. comes from the Industrial Training Research Unit (1978). The unit reports that there has been a general erosion of many aspects of the supervisor's job. Bowey (1973) associated the supervisors' attitudes concerning erosion of pay differentials and status with supervisors' membership of a union. The ITRU report descri-

bes that the apparent lack of agreement between the supervisor and management regarding the definition of the supervisor's role may be a result of poor (or no) consultation, even assuming there exists a job description for the supervisor.

There is some support (Sasser and Leonard, 1980) for the view that when supervisors are consulted and given responsibility for important decisions, they will work more effectively with management. The BIM report recommends that the supervisor should be involved in the resolution of grievances, disciplining, and decisions concerning working conditions.

With reference to role studies which have relevance to the supervisor, Kahn et al (1964) describe some supervisory tasks as "boundary-spanning" in that they involve moving across organisational boundaries at different levels. They propose that, as a result of their research, such boundary-spanning activities would be more conducive to role conflict and ambiguity than non-boundary-spanning tasks, as they involve activity in areas which are more unfamiliar and uncertain. Keller, Szilgyi and Holland (1976) found that their sample of supervisors, unlike their sample of managers and engineers, did respond according to the Katz et al theory: that is, their boundary-spanning activities were highly related to role conflict and role ambiguity.

The lack of clarity surrounding the supervisor's role (ITRU Report 1978), and the difference in role perceptions between the supervisor and his superior both suggest that role ambiguity may be a common characteristic of the supervisor's job. Child (1982) reports that two-thirds of his sample of supervisors in manufacturing companies in the Midlands experienced ambiguity about what they were expected to do in their jobs. Approximately half of the supervisors were con-

cerned that they did not possess sufficient relevant information to perform their jobs adequately. Many of the ambiguous and uncertain issues were concerned with production problems. On a more individual level, 43% of supervisors did not know how they were evaluated by their superior and half of them were anxious about the fact that they felt unsure of promotion criteria. Although the results of Child's study do not indicate causality, they do suggest that job characteristics influence job satisfaction by a 2-stage process. Firstly, pressure and role ambiguity seem to generate stress and job tension and then these two factors contribute to a lowering in job satisfaction.

Studies primarily concerned with the motivation of the supervisor/foreman are few, and this may reflect the tendency for researchers to be more concerned with effects of the supervisor's behaviour rather than the determinants or antecedents of his work behaviour, such as his motivation.

The results of a study by Gruenfeld (1962) indicated that motivation for self-development and actualisation of potential looms large in the motivational need hierarchy of industrial supervisors. Porter (1961) reached similar conclusions in his study of need satisfaction in management jobs. He further suggested that higher-order needs are, relatively, the least satisfied needs in lower and middle management positions.

Porter showed that lower-level management jobs (such as that of foreman, of supervisor) are more likely to produce deficiencies in psychological need fulfilment than are middle management positions.

An extension of the motivational research carried out by Herzberg et al (1959) was developed when Schwartz, Jenusaitis and Stark (1962) completed their work. They

found that their results strongly supported the conclusions of the previous study, (Herzberg 1959), identifying job-related factors with positive work experiences and contextual factors with negative experiences. More recent research by Thurley (1972) has defined one of the main problems in the area of supervision as the decline in the traditional supervisory role and its effects upon the work motivation and performance of the supervisor. It is common to read of lack of drive or motivation (Thurley and Wirddenius 1973) and it has been suggested this may be due, in part, to the high levels of uncertainty often experienced by the supervisor (i.e. role ambiguity) and the disappointment of management with the performance of the supervisor in his role.

Maurer's study (1969) was one of the few studies to focus directly upon the industrial supervisor's work motivation. His research examined the way in which differences in the existence of, and satisfaction with, higher level job characteristics (esteem, autonomy and self-fulfilment) affected the degree of work role involvement experienced by the supervisor.

Reference to the perceived status of the supervisor is made in research concerning the way in which supervisors view their rewards. Results of recent studies tend to suggest that membership of an occupational group does have some effect on the perception of reward equity (Belcher and Atchison 1979). Although these results cannot be seen as conclusive, the findings indicate that supervisors, as an occupational group, do have some set of predominantly job-related inputs that affect these perceptions. An important component in the supervisor's reward package appears to be the status level attained by the supervisor. His status has, historically, been considered as a reward that has been earned by exhibiting skills on the job, experience and leadership. According to Equity theory research, reduction

of status in the reward package can lead to supervisors changing their quality of work or other performance criteria. In other words, supervisory reward systems appear to be sensitive to the status level and any reduction in state will encourage either other types of reward or a reduction in the supervisor's involvement in the job. As an occupational group, supervisors seem to perceive their rewards differently from either management (Tombari 1980) or their subordinates (Belcher and Atchinson 1979).

The amount of research effort that has been invested into the area of supervisory behaviour reflects the importance researchers and managers attach to the role of the industrial supervisor as a vital element in the effective operation of a manufacturing organisation. He may be seen as the link between operatives and functional management in a manufacturing context. The supervisor is unique in that he has continued direct contact with, and control over, operations at the shop floor level.

Perhaps illustrative of the problems which supervisors commonly face is provided by the results of a survey by the Research Institute of America (1977), which posed the question "What major problems do supervisors face?", to managers and supervisors. A markedly different opinion of problem areas emerged from each group. The RIA suggested that the substantial disagreement may be due to several factors, perhaps most significant of which was the proposition that many managers were 'out of touch' with the needs of their supervisors, which is perhaps indicative of the deterioration of the communicating relationship between supervisor and manager.

The results of the Hill study (1976) and the B.I.M. (1976) and ITRU (1978) reports, all refer to the inadequacy of communication with supervisors, which may be one possible

source of the differences in role perceptions of the supervisory role between supervisors and managers. Hill (1976) refers specifically to this suggestion when he found that "managers displayed imperfect knowledge of what their foreman did and also what their foremen thought they were doing".

To summarise the previous section, the following points are of particular relevance to this study:

1. There is consistent evidence to support the view that the traditional supervisory role had deteriorated in several respects over the past decade.
2. Much previous research concerning supervisory behaviour has focussed upon the outcomes and effects of the supervisor's behaviour upon subordinate performance.
3. The supervisor/foreman seems to be more likely to experience role ambiguity and conflict due to the nature of the supervisory role itself which may include boundary-spanning activities, a lack of clarity concerning the definition of the supervisor's role, and inadequacy of the communicating relationship between supervisor and manager.
4. Role ambiguity appears to influence the incumbents' work attitudes. A negative relationship with job satisfaction and performance has been indicated.

1.2 Review of Motivation Theory

Over the past 15 years or so, there has been a general movement amongst academic researchers against the previously widely accepted statement that job satisfaction is likely to lead to improvements in work performance. The thesis that a happy satisfied worker is necessarily highly motivated and productive has lost much of its credibility and hence popularity. Attention has therefore focussed upon the other antecedents of work performance, one of which is the motivation of individual employees. The more traditional theories of Maslow and Herzberg (and their developments) will be reviewed in the following section, followed by a description of the ERG theory of Alderfer, the Job Characteristics Model, Adams Equity theory, and the currently most popular, Expectancy theory.

When considering the negative criticisms of Need-Satisfaction theories, if popularity amongst academic researchers can be associated with validity and adequacy of a theory, the Need theory and Herzberg's two-factor theory have suffered considerably over the past decade. Increasing criticism has been directed at Need for Achievement theory (Entwist 1972) and Herzberg's theory has had serious doubts cast upon it (Locke 1975).

Need Satisfaction theories have largely developed as a result of Maslow's Need Hierarchy theory (1943, 1954). According to Maslow, motivation results according to the fulfilment (satisfaction) of a hierarchy of 5 need levels (physiological, safety, affiliation, esteem and achievement, and self-actualisation needs). He further proposed that the importance of higher needs increases when lower needs become satisfied, and that a satisfied need was not a motivator.

In order to test Maslow's Need Hierarchy, Hall and Nougaim (1968) studied a sample of 49 management level employees of

an operating subsidiary of the American Telephone and Telegraph Company over a period of five years and found no strong evidence for either Maslow's hierarchy or a revised two-level hierarchy. However, the authors do admit to encountering several methodological problems which may have affected their results. Their most difficult task was determining a method by which to test Maslow's model and, specifically, identifying testable hypotheses from Maslow's theory.

In a more recent examination of Maslow's work, Wahba and Bridwell (1976) reviewed ten factor-analytic and three ranking studies testing Maslow's theory, and these showed only a partial support for the proposition of a human need hierarchy. Again, the authors referred to the difficulties encountered in testing the theory. The issue of the testability of Need-Satisfaction theory is addressed by Salancik and Pfeffer (1977) who use the characteristic of "difficulty in testing" as a reflection of the inadequacy of Need-Satisfaction theory. Particularly problematic in the Wahba and Bridwell study was the concept of need itself. When considering more favourable aspects of Maslow's work, Miner and Dachler (1973) describe the theory as useful in its own right as it has generated many ideas and provides a framework for exploring many diverse research findings. In addition, much research designed to test the need hierarchy concept has not been free from weaknesses itself, particularly with respect to the interpretation and operationalisation of the theory, the methodology used to test the theory, and measurement difficulties.

In an attempt to refine Maslow's hierarchy, Alderfer (1969) proposed a theory (which will be discussed in more detail later) based upon three need categories, which were existence, relatedness and growth needs (ERG). His theory introduces the concept of need frustration. Alderfer's stu-

dies (1969, 1972) showed no support for Maslow's theory but provided supporting evidence for his own ERG theory.

Alderfer's work has perhaps gained additional credibility due to his use of cross-lagged correlational techniques which showed support for the direction of relationship between variables as predicted by Alderfer and also suggested aspects of causality.

Maslow's hierarchy of needs has been re-defined by Herzberg et al (1959) who categorised them as either "hygiene" factors or "motivators". Herzberg's theory postulates the causes of satisfaction and dissatisfaction as quite distinct and separate and not at opposite ends of a continuum as previously envisaged. The presence of hygiene factors can therefore, according to Herzberg, merely prevent dissatisfaction and providing more of such factors does not support the theory (Hulin and Waters 1972, Waters 1974). Further criticism from King (1970) and Schneider and Locke (1971), concerns the dependence of the theory upon the methodology employed by Herzberg.

Studies employing different techniques strongly support the view that motivators are important both in satisfaction and dissatisfaction. The major contribution of Herzberg's theory seems to be that it has achieved a shift in interest in the concept of job satisfaction away from the human relations approach, which focusses upon human interactions at work, towards the importance of the job itself as central to the understanding of job satisfaction.

Herzberg also initiated the movement to study and redesign jobs to provide psychological growth opportunities to individual employees. An extension of this movement to study jobs has been the development of the Job Characteristics Model of motivation by Hackman and Oldham (1975, 1976) which will be described after an evaluation of research concerning Herzberg's theory which follows.

Much of the research concerned with testing Herzberg's theory has provided conflicting results with much of the supportive evidence showing a common methodology with Herzberg. Schwartz, Jenusaitis and Stark (1962), Myers (1964), Saleh (1964) and Dysinger (1965), all supported Herzberg's findings using the same methods. Subjects were required to describe situations of previous satisfaction and dissatisfaction at work and also described incidents which they considered caused each satisfying/dissatisfying event. Ewen (1964) and Dunnette and Kirchner (1965) have described several advantages of using such a method, among them being the problem of the subject's selective bias and his projection of personal failure onto external sources.

Lindsay (1965) revised the order in which Herzberg's subjects recalled job incidents and their attitudes towards these experiences (i.e. first recalling job factors and then the attitudes which experiences produced). Lindsay found that "satisfiers" accounted for three times as much variance in overall job satisfaction as the "dissatisfiers" (i.e. it produced both more satisfaction and more dissatisfaction than the dissatisfiers). This view agrees with the findings of both Wernimont and Dunnette (1964), and Friedlander (1964). Waters et al (1972, 1973) also produced evidence that disagreed with Herzberg's results. They found that attitudes towards motivators are more highly correlated with both job satisfaction and job dissatisfaction than are attitudes towards hygiene factors.

Locke (1975) has pointed out that the Herzberg incident classification method has confused two levels of analysis. These are events (the events of situations that occurred or were present), and agents (who or what has caused the event to occur or caused the situations). When employees describe satisfying and dissatisfying incidents and these are classified separately by event and agent, then the results

of the Herzberg study were not replicated. There are consistent findings concerning events which suggest that "motivator" events are more likely to produce both satisfaction and dissatisfaction than "hygiene" events (Graen et al 1973, Locke 1973).

The work of Wall (1973) indicates that all individuals do not react equally to motivators such as opportunities for growth and autonomy. In addition, he found that the tendency to list hygiene factors as sources of dissatisfaction correlated significantly with a measure of ego-defensiveness. This can be seen as the individuals's defensive tendency to give credit for satisfying events to himself and blame the cause(s) for dissatisfying incidents on others such as supervisors or colleagues.

Campbell et al (1970) describe Herzberg's 2-factor theory as having served its purpose and that it should be either considerably modified or discarded. Hackman (1969) made an effort to modify the theory as did Evans and McKee (1970). Hackman saw those who obtained satisfaction from their work as primarily "stimulation seekers", whilst those who did not obtain such satisfaction were categorised as "emotional responders". Hackman's work is closely allied to that of Evans and McKee who describe a similar division between individuals, but labelled them "Internals" and "Externals".

Research by Schwab and Henneman (1970) indicates some support for Herzberg's original theory but only when aggregate data was used. When individual responses to favourable and unfavourable incidents were analysed, the theory was not supported. Probably one of the most significant studies which provides additional negative evidence against Herzberg's theory is that of Schwab, Devitt, and Cummings (1971) which questions the fundamental validity of extending Herzberg's theory from job satisfaction to work motivation

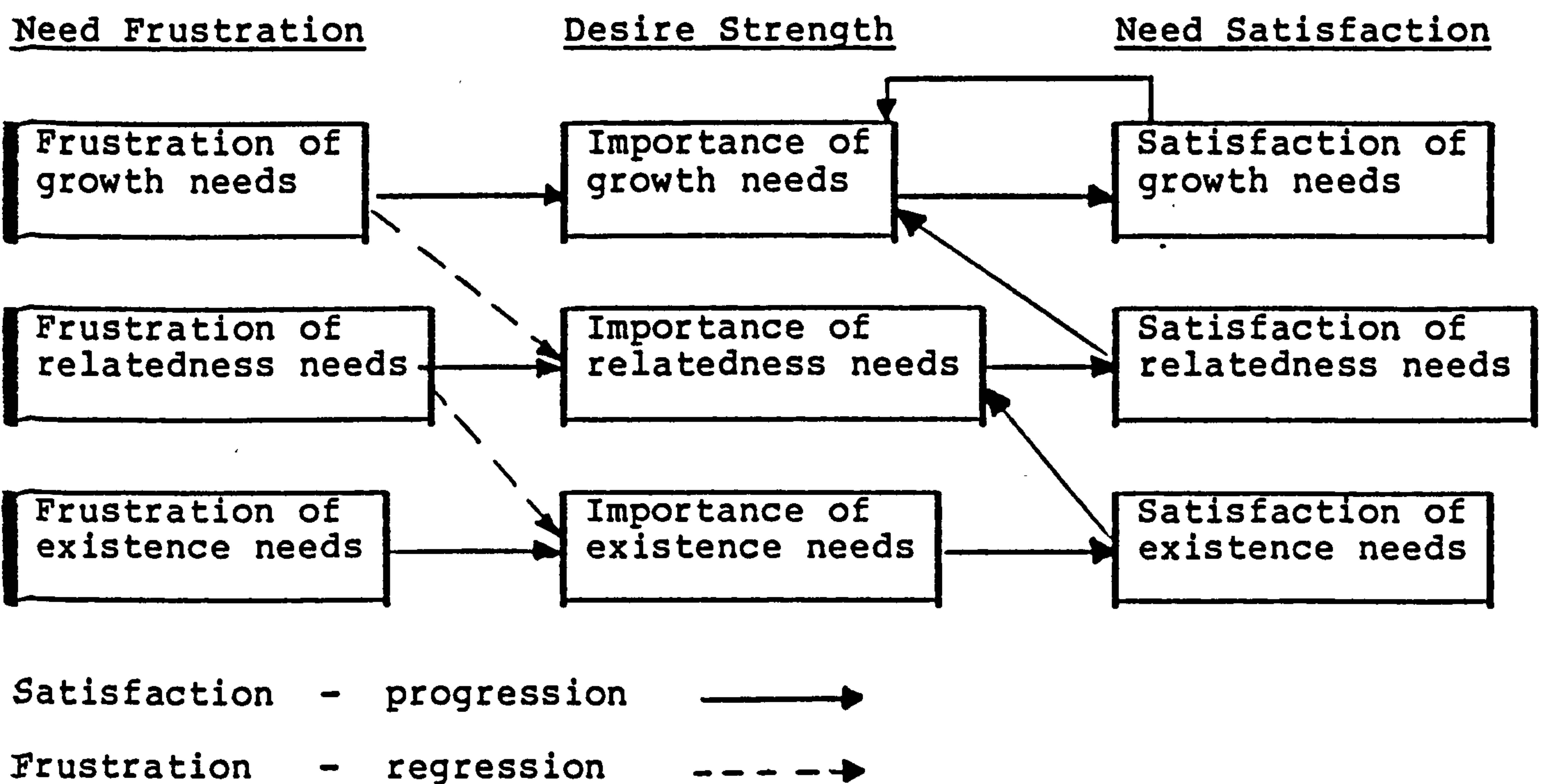
because predicted performance relationships cannot be demonstrated. This is an argument against including Herzberg's theory among work motivation theories, but until there is further clarification of the relationship between satisfaction, motivation and performance, there seems little likelihood of achieving a satisfactory solution to the problem.

Alderfer (1969, 1972) presented a development of Maslow's need hierarchy when he developed the ERG theory. Alderfer has reduced Maslow's 5 hierarchical needs levels to three, which are existence, relatedness and growth needs. Existence needs consist of those needs which are necessary to satisfy in order to maintain human existence (for example, food and water would fall into this category). Relatedness needs concern how individuals interact with their social environment, an example of such a need would be the need for social intercourse. Growth needs involve the interaction of the individual with his environment in such a way as to develop the abilities and capacities the individual feels are most important for his personal development. This need category comprises the needs of self-esteem and self actualisation. The model proposed by Alderfer is quite similar to Maslow's model in its hierarchical nature (progression up the hierarchy occurs by satisfaction of respective need) but is distinct in that Alderfer introduces the concept of frustration. Figure 2, illustrates the process of frustration-regression which occurs when an individual is repeatedly frustrated in his endeavours to satisfy growth needs, relatedness needs are likely to become salient for the individual and he may then direct his efforts towards satisfaction of relatedness needs. The ERG model further suggests more flexibility than that of Maslow in that Alderfer recognises that more than one need may be operating at any one time. This is clearly in opposition to Maslow's concept of prepotency, as Alderfer suggest that

several needs may be present and consciously recognised by an individual.

The value of Alderfer's work lies in its explanation of the process dynamics between individual need satisfaction (and frustration) and desire. It does not, for example, attempt to explain or predict effort levels. Hackman and Oldham (1975, 1976) developed a model which describes the conditions under which individuals will be internally motivated. Their model (see Figure 3) is largely an extension of the work performed by Turner and Lawrence (1965), and Hulin and Blood (1968) whose research in work design emphasised the objective characteristics of jobs.

Figure 2 Alderfer's ERG Model

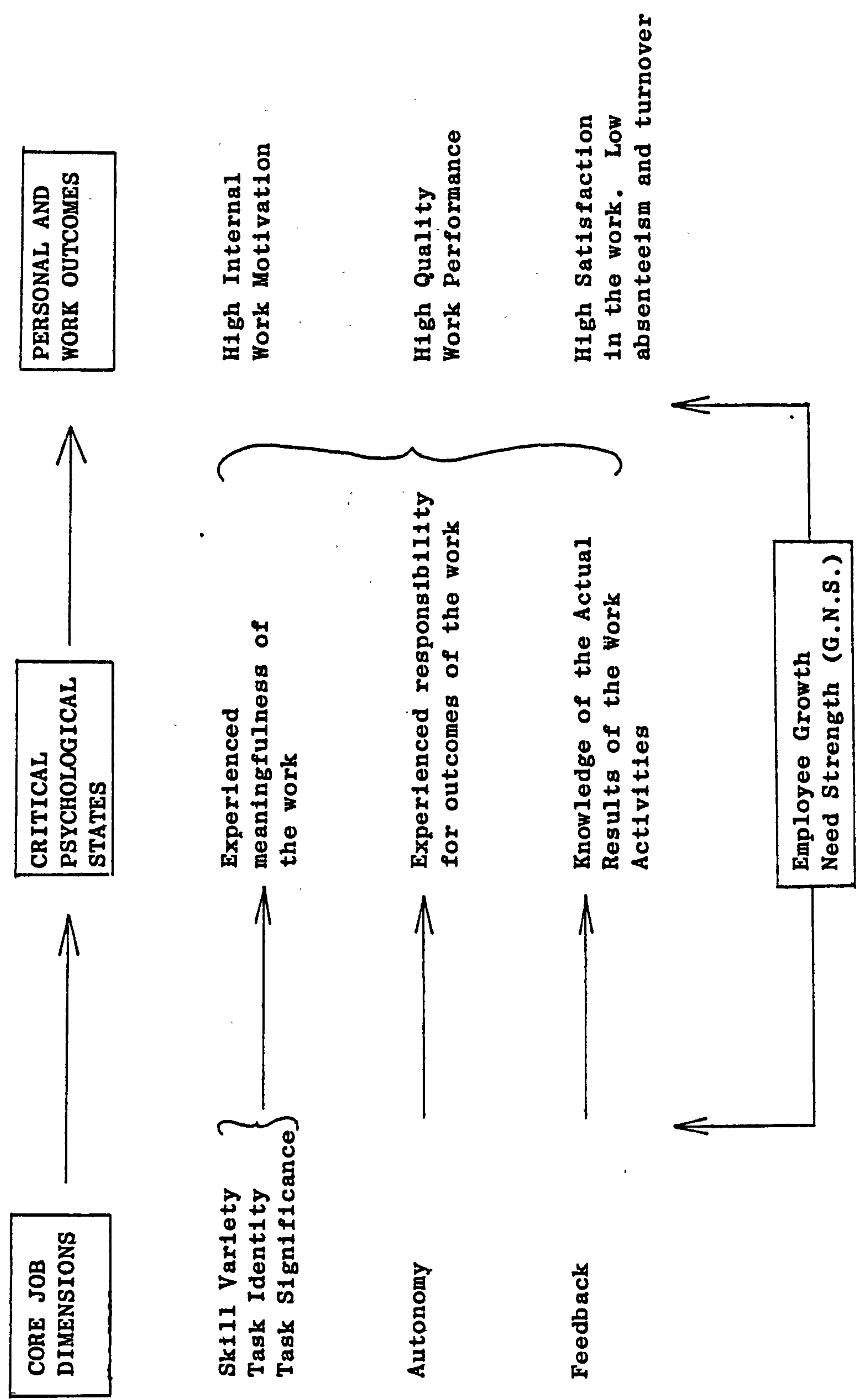


The underlying assumption supporting the model is that job characteristics can directly influence employee attitudes and behaviour at work. Five "core job dimensions" are viewed as initiating three psychological states which then cause a number of personal and work outcomes. The basic model described in Figure 3 illustrates how the link between job deminsions and the psychological states is moderated, according to the authors, by the individual's growth need strength (GNS).

The job characteristics model is clearly an important contribution to the area of job redesign and employee motivation in that it summarises and integrates a large amount of previous research data by identifying those features of jobs which affect employees attitudes and behaviour. Unlike Herzberg's work, this theoretical formulation does allow the hypothesised relationships between the variables to be tested. The effect of increases in the "critical psychological states", are thought to be moderated by the employee's growth need strength and result in higher internal motivation, greater job satisfaction, better work performance, and lower absenteeism and labour turnover.

Although Hackman and Oldham have found substantial support for their model, recently Arnold and House (1980) have challenged the validity of the use of a motivating potential score (MPS) formula which is based upon the hypothesis that all three psychological states are required for the internal motivation of an individual to exist; their results showed no support for such a formulation. When Arnold and House studied the job characteristics - job outcome relationships, they found that the three way interactions predicted by the MPS formula:

Fig. 3 THE JOB CHARACTERISTICS MODEL OF MOTIVATION (Hackman & Oldham, 1976)



$$\text{MPS} = \frac{(\text{SKILL} \quad \text{TASK} \quad \text{TASK}) \times (\text{Autonomy}) \times (\text{Feedback})}{\frac{(\text{VARIETY} + \text{IDENTITY} + \text{SIGNIFICANCE})}{3}}$$

explained a significant amount of variance in only the growth satisfaction measure. Arnold and House describe this as of some significance as Hackman and Oldham refer to the psychological state as the "causal core" of the job characteristics model and argue that all three psychological states are necessary for the existence of internal work motivation, however, their study did indicate that the job characteristics and psychological states are significantly related to various personal and work outcomes. Salanick and Pfeffer (1977) view the most important contribution of this model to be that the job characteristics list has been generated by reference to theory and can therefore be tested. However, they suggest that jobs can be characterised in many different ways and the selection of job dimensions therefore become problematic. In addition, the classification of variables within the Job Characteristics model assumes an individual need structure. Clearly one could imagine alternative formulations. For example, internal work motivation appears to be a possible factor for inclusion as a critical psychological state rather than an outcome variable, and absence and lateness may be explained as a further set of outcomes dependent upon growth satisfaction or job satisfaction.

Expectancy theory formulations are currently the most popular and heavily researched approaches to motivation theory. Vroom's Expectancy - Valence models of motivation, and its subsequent modifications and development, have become the most dominant theories in organisational research. Theories of instrumentality, including that of Vroom (1964), can be described by the hypothesis that the behavior of an indivi-

dual is partly determined by his expectations that his behaviour will lead to various outcomes and his subjective evaluation of these outcomes. Vroom's statement of the theory has been the basis for much of the research work in this area. Vroom has presented three models, one for the prediction of the valences of outcomes (i.e. the perceived positive or negative value ascribed by the individual to possible work outcomes), one for predicting the force toward behaviour and another a job performance model. An outcome is seen as anything an individual may want to attain and valence as the anticipated satisfaction with an outcome. The value of an outcome is defined by Vroom as the actual satisfaction resulting from attainment of the outcome.

Vroom's valence model states that the valence of an outcome to a person is a "monotonically increasing function of the algebraic sum of the products of the valences of all other outcomes." The valence of a specific outcome is described by the following formulation.

$$V_a = f \sum_{b=1}^n (V_b \cdot I_{ab})$$

where V_a = valence of outcome, a
 I_{ab} = the instrumentality to
 the individual of outcome,
 a for the attainment of
 outcome, b

V_b = the valence of outcome, b

n = the number of outcomes.

The perceived instrumentality (I) is defined by Vroom (1964) as the "degree to which the individual sees the outcome in question leading to the attainment of other outcomes". This model has been applied to the prediction of job satisfaction in the following manner. The model predicts that the job satisfaction of a worker is a result of the instrumentality of that job in attaining other outcomes and the valence of

those outcomes. The model which is perhaps more directly relevant to work motivation is the formulation described below, where Vroom views the force of an individual to choose a task and level of effort to be applied to a task as a function of two factors. One is the expectancy that the individual's behaviour will result in attaining outcomes valued to him. The other is the valence, or perceived value of outcomes, resulting from the behaviour.

An individual's expectancy, as defined by Vroom, is his belief concerning the probability (subjectively evaluated) that his behaviour will be followed by a valued outcome.

As expectancy is a probability it ranges from zero to plus one, instrumentality, however, is an outcome association and is perceived correlation.

Vroom suggests that the formulation below which can be seen in its simplest form as Force = (Expectancy that effort causes attainment of values outcomes) X (the valence of the outcomes) could be used to predict effort, occupational choice, remining in a job.

$$F_i = \sum_{j=1}^n (E_{ij} \cdot V_j)$$

- where F_i = the force on the individual to perform act i
- E_{ij} = the strength of the expectancy that act i will be followed by outcome, j .
- V_j = the valence of outcome, j .
- n = the number of outcomes.

the above model suggests that workers will choose between alternative work behaviours so they may optimise their

expected value. For each activity, therefore, individuals multiply their perceived valences of all outcomes they consider by their expectancy values, and then choose the action with the highest expected sum.

The third model which Vroom has presented is the job performance model which describes the job performance of an individual as a function of the force to perform an act (F) and ability (A).

Since Vroom's original work concerning what is now called Expectancy theory, there have been several additions, extensions and modifications to it. Considerably more space has been devoted in this review to a discussion of expectancy theory than other theoretical approaches as it provides the currently dominant approach in the area of work motivation. In addition, the reservations concerning the basic assumptions implicit in expectancy theory and controversial methodological issues will be introduced. The major changes to expectancy theory that have taken place are now described.

One of the first modifications to the theory was that first and second level outcomes were differentiated. (Galbraith and Cummings 1967, Porter and Lawler 1968, Graen 1969). First level outcomes can be viewed as work behaviour, whilst second level refers to the situations to which the first level outcomes are expected to lead (such as financial rewards).

Galbraith and Cummings (1967), distinguished further between intrinsic and extrinsic valences associated with outcomes, which emphasises the fact that some intrinsic valences are associated with the work behaviour itself. Symbolically, the work of Galbraith and Cummings can be shown as:

$$W = E \left(\sum_{j=1}^n I_{ij} \cdot V_j \right)$$

where W = Effort

E = Expectancy that effort leads to performance

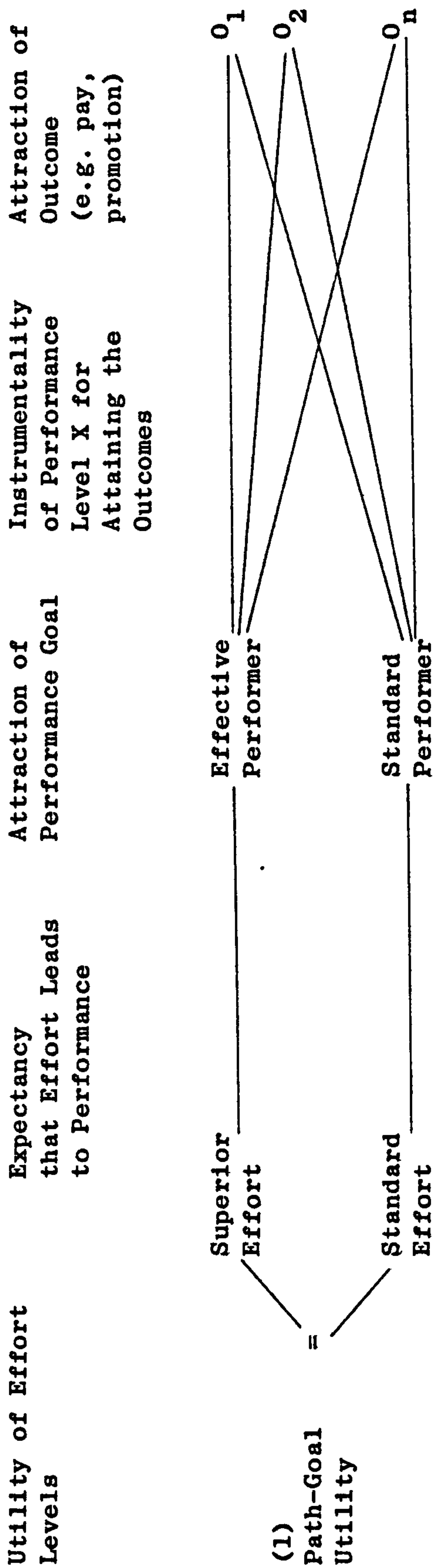
I_{ij} = Instrumentality of performance for the attainment of second-level outcomes

V_j = Valence of performance for the attainment of second-level outcomes.

The authors have combined the original effort and valence models as presented by Vroom into one formula. It was tested by each subject indicating the degree to which working hard (effort level) was seen as leading to a good performance (performance level). The degree to which good performance was likely to lead to each of a group of organisational outcomes (e.g. salary, security) was also indicated by the subject as well as his valence estimation for each outcome. These variables were then combined in the formula above to provide a single E (IV) score for every subject and then these scores were correlated across subjects with some criterion variables (which was normally a rating of effort of performance carried out by self, superior or peers).

The modification of expectancy theory developed by Graen (1969) incorporates some theoretical aspects of role theory and attitude theory. The model below attempts not only to explain effort or choice behaviour but the wider area of job behaviour. Graen has clarified difference between first and second-level outcomes. The first level of outcome is seen by Graen as the work role. Examples of work roles are "effective job performer", "team leader", and "group leader" and they are achieved by performing those behaviours

Fig. 4 **SCHEMATIC REPRESENTATION OF SIMPLIFIED GRAEN MODEL**
(Source: Dunnette (Ed.) 1976)



expected of the work role so that organisational expectations are fulfilled. Second level outcomes are those that the individual obtains by work role attainment. The two roles upon which Graen focussed being the effective performer and job incumbent (standard performer). The distinction between these two roles is the different levels of effort expenditure, (i.e. none, standard amount, superior amount).

The three categories described in the model are thought to combine in a multiplicative manner with the instrumentality of achieving them to make a particular role attractive to an individual. The amount of effort an individual expends to obtain these roles outcomes is therefore a function of the attraction of the role to the individual and the expectancy that a certain effort level will achieve the role expectations.

Graen's model attempts to predict the likelihood of the expenditure of superior effort. He suggests that the three basic components of the model are External Pressures, Path Goal Utility, and Internal Pressures which combine additively to form the superior effort probability. As Dunnette et al (1976) points out, the operationalisation of the model is complex, and, as in the Vroom model, is largely due to the use of discrete effort levels (i.e. high versus low, superior versus standard).

Further modification to expectancy theory is suggested by the model presented by Lawler and Porter (1968), which was subsequently refined by Lawler (1970, 1973). In Lawler and Porter's original model the dependent variable was individual effort that is directed towards job performance. Their thesis is that, due to job performance, an individual will receive intrinsic or extrinsic rewards (or both). The individual's own perception of the value of the reward which

he receives is seen as one of the major influencing factors determining the individual's work effort (and can be seen as synonymous with Vroom's concept of valence). A further determinant of effort is the relationship perceived by the individual between effort and performance, and between performance and receiving rewards. Lawler and Porter describe this factor as the probability that performance depends upon effort and that rewards depend upon performance.

Two feedback loops are described in the model. One illustrates that the effort-reward relationship will vary over time due to organisational reward practices and also changes in how an individual values intrinsic rewards. The other loop concerns the equity of the received reward as perceived by the recipient. The satisfaction (or dissatisfaction) with the equity (or inequity) of a reward is thought to influence the way the individual subsequently values the reward.

Lawler (1971, 1973) has refined certain aspects of the original model in the following way. Lawler views the individual's subjective evaluation of the probability that his effort will achieve accomplishment of his goals is determined by 3 factors, they are:

1. The information concerning the task.
2. The amount of information the individual possesses concerning his performance on similar tasks.
3. The individual's perception of his task competence (self-esteem).

A further feedback loop has been added by Lawler which shows the effect of task failure/success upon the self-esteem of the individual.

Campbell and Pritchard (1976) present what can be described as an integrated model of expectancy theory approaches. They view their model not as providing a clear statement of the dynamics of the interactions between factors affecting the motivational process but rather than their model "may be useful in giving research and practice". The model is illustrated in Figure 5 overleaf.

The dependent variable in the model is either:

1. Choice made between alternatives.
2. Amount of Effort directed towards a goal.
3. The Change in effort or choice which occurs over time.

The authors define a specific performance level of a specific task as a "task goal." They see task goals involving several components, they are:

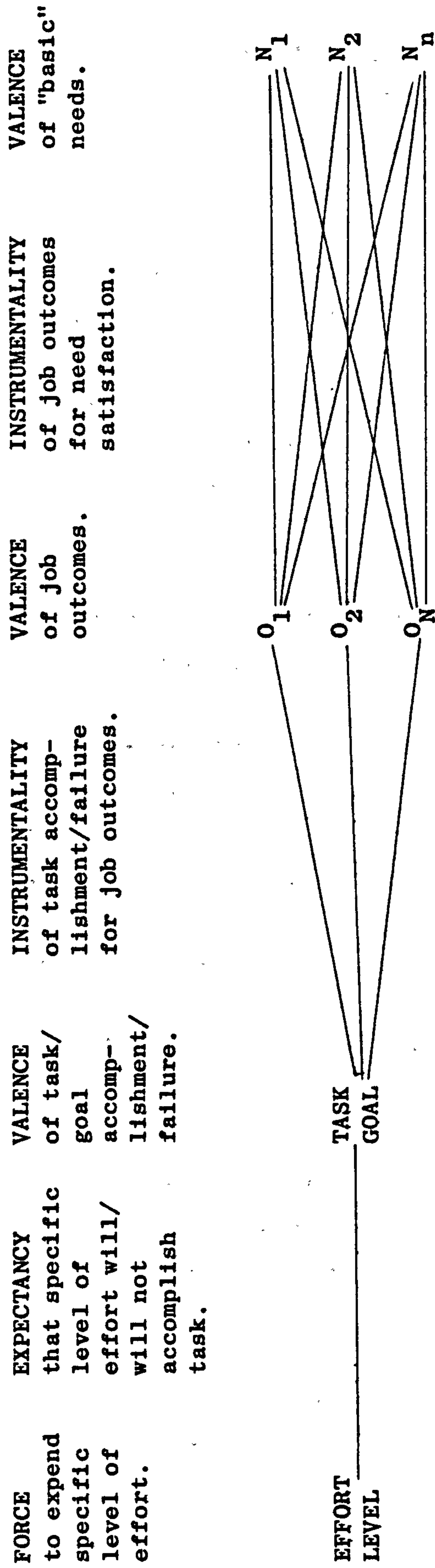
1. Content or types of behaviour required for performance.
2. Dimensionality (one or many factors).
3. Content structure - levels of difficulty.
4. Relative clarity or ambiguity of task goals.
5. Individual who sets or determines the task goal.
Who defines difficulty and content.

The model distinguishes between outcomes directly dependent upon accomplishment of the task and outcomes one stage removed from the immediate consequences of performance of

Fig. 5

AN INTEGRATED EXPECTANCY-VALENCE MODEL

(As presented by Campbell & Pritchard, 1976)



(The diagram shows only one effort level and one success level for one task goal. A similar set of relationships exists for other effort levels and other tasks and levels of osuccess).

the task. The latter set of outcomes concern the satisfaction of more basic individual needs. As in the Vroom model, the authors regard the valence of outcomes (perceived or anticipated value to the individual) as a determinant of action. They further describe a valence for performance, which is a function of the goal-contingent outcomes and the instrumentality of performance for achieving the outcomes.

To summarise the integrated expectancy-valence model of Campbell and Pritchard, the work effort which an individual directs towards performing a task can be seen as a function of:

1. The Expectancy that effort leads to task accomplishment.
2. The Instrumentality of accomplishing the task in order to obtain or avoid task-contingent outcomes.
3. The Valence of the outcomes.

or in more shorthand terms:-

$$\text{Effort} = f(\text{Expectancy} \times \text{Instrumentality} \times \text{Valence of Task Contingent Outcomes})$$

It is not the intention of the author to evaluate the predictions from expectancy-valence models which are thought to predict effort. This research is not designed to determine whether information concerning an individuals' expectancies, valences, and instrumentalities will predict the effort an individual will expend. However, it should be recognised that expectancy theory has received considerable criticism on methodological and conceptual aspects of the theory (Mitchell 1974, Leo and Pritchard 1974, Schmidt 1973), particularly with respect to the central role which individual

organisations play in the process implicit in the theory. That is, the way in which individuals perceive their own behaviour as leading to (or not leading to) specific work outcomes. In addition, this issue of whether or not individuals assign probabilities to work outcomes remains controversial. It would perhaps be more beneficial to devote further research attention to the issue of the conceptualisation and operationalisation of work effort, which seems to have been neglected.

Another major theoretical approach to be developed and extensively researched in recent years has been those theories concerned with the process of social comparison. Considerable theory and research in the field of social science has been designed to explain the cognitive or behavioural responses to work situations. The following section is devoted to a presentation of one main theory of the social exchange process which is called Equity theory as initially presented by Adams (1963).

Social exchange theories, in general, deal with social relationships and the exchange process which occur as part of these relationships. During these relationships, individuals are thought to make investments of their resources (inputs) and have expectancies concerning outcomes. A major component of these theories concern the method by which individuals evaluate the exchange process.

Darley and Darley (1973) indicate that individuals depend upon information provided by others to assess their own, and others' actions due to the ambiguity which is often present in social situations. Adams' equity theory is another major theoretical approach to be developed and extensively researched in recent years has been those theories concerned with the process of social comparison. Considerable theory and research in the field of social science has been

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Darley and Darley (1973) indicate that individuals depend upon information provided by others to assess their own, and others' actions due to the ambiguity which is often present in social situations. Adams' equity theory describes the exchange relationships between inputs (defined as the resources an individual may invest in an exchange) and outcomes (results of the exchange process). In mathematical terms, the ratio of an individuals' outcomes to his inputs is compared to the ratio of outcomes to inputs of another individual or group or individuals. In other words, the individual evaluates his outcomes by means of a comparative process involving the inputs and outcomes, in Adams' words, of a "relevant other" based upon the individuals' perceptions on inputs and outcomes.

An equity situation is said to exist when the ratio of an individuals' outcomes (called O_p) to his inputs (I_p) is equal to the ratio of others' outcomes (O_o) and inputs (I_o)

Symbolically, when $\frac{O_p}{I_p} = \frac{O_o}{I_o}$

and a state of inequity is present when:-

$$\frac{O_p}{I_p} \neq \frac{O_o}{I_o}$$

According to Adams' theory of Equity (1965), the motivational consequences of inequity can be described as follows:

- a) Inequity, as perceived by an individual causes tension in the individual.
- b) The amount of tension felt by the individual is proportional to the magnitude of the inequity.
- c) The tension created in the individual will motivate him to attempt to reduce it.
- d) The strength of the individual's motivation to reduce the inequity is proportional to the inequity perceived by the individual.

Inequity would exist, for example, if a person were relatively underpaid or relatively overpaid. This is a situation to which employers have paid much attention as the theory predicts that people will feel dissatisfied when in an inequity situation as a result of overpayment. However, Levanthal et al (1969) have shown that individuals are (perhaps not surprisingly) more likely to accept overpayment than underpayment.

Adams describes six alternative mechanisms an individual may employ to reduce the inequity he may perceive. They are:

- a) Alter individuals' inputs.
- b) Alter individuals' outcomes.

- c) Cognitively alter inputs and outcomes.
- d) "Leave the field" (withdraw, resign).
- e) Act in such a way to change the inputs or outcomes of "other".
- f) Change the "other" used by the individual for comparison.

Adams proposes the thesis that a person will try to maximize these outcomes he perceives as positively valent and minimize his "costs" (effortful inputs) in restoring equity. An examination of several studies which test the predictions of Equity theory shows a consistent support for the theory (Adams 1967, Goodman and Friedman 1969, Weiner 1970, Pritchard, Dunnette and Jorgenson 1972). Others (Campbell and Pritchard, 1976), have been critical of much of the research concerning Equity theory as several alternatives may be offered to explain individual performance differences. The criticism suggests that to create overpayment inequity situations researchers often encourage perceived inequity in the subjects studied by telling them that their qualifications or experience do not make them entitled to the financial rewards they receive. It is suggested that this situation may not only result in perceived overpayment inequity, but also the subjects may feel that their job security and self-esteem has been threatened. Therefore, the subject's behaviour may be predicted by the theory as a result of the experimental conditions rather than perceived inequity. A current research interest is the investigation of how an individual decides upon his standards for comparison when evaluating inputs or outcomes. Goodman's research (1974, 1977) has lead to the development of a model of the variables which are thought to affect the selection of this standard. Goodman suggests that the choice of a

standard (or "referent", as he calls it) is a function of the availability of information about the standard and the relevance (attractiveness) of the standard for the comparison.

Walster et al (1976) have suggested a refinement to the Adams' Equity theory formulation to deal with the situation where inputs and outcomes may be negative. The authors describe the situation where a person contributes positively valued inputs but obtains negative outcomes is inequitable in comparison to the "relevant other's" positive outcome but negative inputs. The authors present a modified formulation to provide a solution.

The focus of research into equity theory in previous years has been concerned with prediction of employees' reactions to pay. This has presented researchers with a context where the variables are relatively easily qualified, but the heavy emphasis on employees' responses to pay has perhaps inhibited the growth of equity theory into other areas of social relationships in organisations. Lawler (1973) suggests that equity theory can be subsumed under the general valence/expectancy theory of motivation. He states that if the equity an individual perceives can be shown to be a factor which affects the valence of outcomes, then expectancy theory can explain much of the data generated by equity theory research.

Summary

Considerable research in the field of employee motivation has been concerned with the attitudes, needs, values and expectations of the job incumbent in the previously described models of motivation. It is apparent that no comprehensive, integrated theory currently exists to explain

the large volume of research data and each of the theoretical formulations possess shortcomings either in terms of lack of supportive evidence, testability of theory/model, methodological problems, or practical application in an organisational setting.

Several of the previous studies have attempted to investigate relationships between the many variables concerned with the motivational needs and efforts of employees. The design of the current study has been chosen in an attempt to redress the balance; that is a few selected variables will be investigated in an attempt to explain one aspect of the motivational process of one group of employees, the first-line production supervisors/foremen. Whilst not designed specifically to test any one motivation theory, this approach implicitly recognises the individual variation of employee needs (need for clarity) and the potential impact of certain perceived characteristics of his job situation (role ambiguity, communication with superior) upon the work motivation of the job holder. The approach adopted in the current study employs what may be described as a 'direct' measure of motivation, that is a measure of an individual's desire to expend effort in the performance of work tasks.

1.3 Role Perceptions

The aim of this section is to present a review of the more integrated models of work performance and satisfaction which emphasise the part played by role perceptions, with particular reference to the influence of role ambiguity upon motivation, performance and satisfaction.

The relationship between the two most commonly researched aspects of role perceptions, role ambiguity and role conflict, and employee satisfaction and performance have

often been shown to be negative (Brief and Aldag 1976, Hamner and Tosi 1974, Rizzo et al 1970). However, some research results (Hamner and Tosi 1974) have suggested that organisational level may moderate the above relationships. As well as the moderating effect of organisational level, both employee participation in decision-making (Schuler 1977) and individual need for clarity (Lyons 1971) have been suggested as moderating the relationships between role perceptions and employee satisfaction and performance.

There is support for the moderating effect of individual variables from Kahn et al (1964) who describe the employee with high ability and skills as more likely to be able to cope with role conflict and ambiguity than an employee of low skill and ability. Schuler (1977) found no support for the view that employees with high ability (operationalised as years of education and years of work experience) are less affected by ambiguity than those with low ability. In fact, he found that, as the lower levels of an organisation, the more experienced employees had lower levels of performance given high role ambiguity, and higher performance levels given low role ambiguity than did employees with less experience. Classical organisation theory and role theory describe the consequences of role ambiguity and suggest that every job in a formal organisation structure should have a specified set of tasks or responsibilities associated with that position to avoid those consequences. In addition, a formal definition of role requirements is designed to enable management to evaluate employee performance with reference to specified criteria, and to provide guidance to subordinates.

However, in a situation where an employee is not sure (or does not know) what, for example, the limit of his authority is or what his required performance may be, it is likely that he will hesitate to make decisions and use perhaps a

"trial and error" method to meet his superiors' expectations.

Role ambiguity, as described by role theory (Kahn et al 1964) is defined as the lack of necessary role relevant information to a particular position in the organisation. According to role theory, role ambiguity results in coping behaviour by the role incumbent and further predicts that he will be more likely to experience dissatisfaction with his role, anxiety, and perform less effectively. The study of Kahn et al, has supported the view that role ambiguity can be a result of one or more of the following factors. Organisation size and complexity, rapid organisational growth, frequent changes in technology, frequent changes in personnel, changes in the environment and managerial philosophies which encourage a restricted flow of information throughout the organisation. Their study indicated that approximately 35% of a U.S. national sample of employees were disturbed by the fact that they felt they had no clear idea of the scope and responsibilities of their jobs.

Porter and Lawler (1968), state that role perceptions refer to the beliefs a person has concerning the behaviours and activities he should engage in to achieve successful performance. They consider that role perceptions refer to where an employee believes he should direct his effort, and the implication for the researcher is that the accuracy of role perceptions should be determined when investigating employee performance. With Lawler and Porter's definition of role perceptions in mind, it seems reasonable to suggest that a useful measurement of role perceptions would include a list of behaviours derived from a job analysis and from this list, an index of accuracy of role perceptions could be calculated. However, Lawler and Porter (1967, 1968) and Lawler and Suttle (1973), chose to measure role perceptions using a 10-item personality scale which was constructed to

assess inner-directed versus outer-directed behaviour. This involved the subjects ranking 10 items with regard to their importance in achieving successful job performance.

A comprehensive review of the research into role ambiguity by Van Sell et al (1980) identified studies which showed that a lack of clarity concerning behavioural expectations "causes a greater concern with own (versus work group) performance, low actual and perceived group productivity, less concern or involvement with the group, lower job satisfaction, unfavourable attitudes towards role senders, and increased tension, anxiety, depression and resentment (Caplan and Jones, 1975). Role ambiguity has also been causally linked to turnover." (Johnson and Graen, 1973).

A study by Rizzo, House and Lirtzman (1970) found a strong negative relationship between role ambiguity and a measure of job satisfaction. A later study by House and Rizzo (1972) supported their conclusion that role ambiguity was strongly related to job satisfaction and further indicated that role ambiguity was more strongly related to job satisfaction than role conflict. However, there is some research evidence that shows that role ambiguity is not always negatively related to job satisfaction and job performance. Tosi (1974) found that role conflict and job satisfaction were negatively related but found no such relationship between role ambiguity and job satisfaction. Hamner and Tosi (1974), as previously mentioned, have suggested that organisational level may be the moderating factor which could reconcile these inconsistent results. They support the view that at the higher level management positions the main problem can be seen as role ambiguity (i.e. a lack of clarity and poorly defined expectations). Studies by Schuler (1975) and Szilagyi, Sims and Kneller (1976), both of which involved a manufacturing organisation in their samples, showed support for House's proposition in that they

confirmed the hypothesis that role ambiguity was more strongly negatively related to job satisfaction at higher levels in the organisation, whilst role conflict was more strongly negatively related to job satisfaction in lower levels in the organisation.

Szilagyi (1977) was one of the few researchers to draw conclusions concerning causality from his study of role perceptions, satisfaction and performance in a hospital. Such conclusions could not be made in several previous studies due to the use of static correlational methods. However, Szilagyi used an interval of six months between data collection and the technique of cross-lagged correlation to make causal inferences regarding the source and direction of causal influence. The results supported the hypothesis that role ambiguity was a source of causal inference with job satisfaction at the higher organisational levels, whilst role conflict was a source at lower levels in the organisation. In addition, his results indicated that ambiguity at higher levels in the organisation has a negative effect upon performance. Further evidence of the effects of role ambiguity upon individuals comes from the Brief and Aldag (1976), and Greene (1972), studies which indicated that role incumbents who suffered from high levels of role ambiguity experienced anxiety, depression, a sense of futility or low self-esteem, low levels of job involvement and organisational commitment and perceptions of low levels of performance.

The role perception transactional process model presented by Schuler (1979) describes the hypothesised relationships amongst organisational communications, role perceptions, and satisfaction and performance. Schuler's model shows that certain dimensions of communication in an organisation will influence satisfaction and performance by the intervening process of communication influencing employee role percep-

tions. This is not to say that all dimensions of communication will be related to performance and satisfaction. The transactional process model indicates that organisational communication should be reciprocally related to role perceptions, role perceptions reciprocally related to satisfaction and performance and that performance and satisfaction should be reciprocally related to organisational communications.

The model illustrated below shows the characteristics of the hypothesized relationships. Schuler states these are:

1. Each part has no interdependence outside the other part.
2. One part is not acted upon by another part (at least over time) but instead there are constant, reciprocal relationships.
3. Action in any part of the model has consequences for other parts.

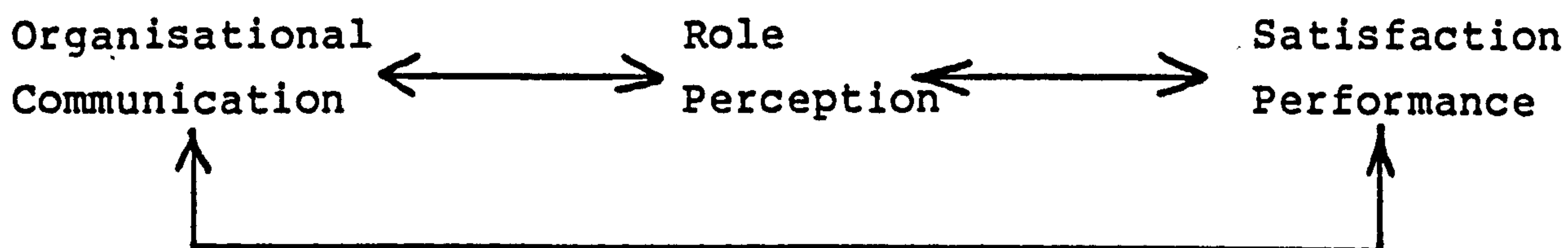


Figure 6 Role Perception Transaction Process Model for Organisational Communication

(Source : Schuler, 1979)

The results of Schuler's research indicate that organisational communication can be understood and its effects predicted by awareness of the role perception process. In

addition, they support his model in that the relationships amongst the communication - role perception - outcome variable appear to be bi-directional. For example, one type of communication, informative communication can reduce role conflict and role ambiguity which, in turn, can increase the flow of informative communication. Also, low levels of role conflict and ambiguity can result in higher satisfaction and performance which can result in increased informative communication leading to a reduction in role conflict and ambiguity and then to higher satisfaction and performance. However, the paths of causality may not necessarily lie in this direction. Schuler fails to discuss whether the situation of high levels of role ambiguity and conflict and much informative communication could exist.

Unlike role conflict, role ambiguity often occurs when the role incumbent is uncertain about the behavioural expectations of his role senders. This concept is closely allied to performance feedback in that a lack of adequate information about an individual's job performance raises doubts and anxiety in the employee's mind concerning the definition of his job requirements (Donnelly and Ivancevich 1975). It therefore seems likely that role ambiguity will be reduced when perceived performance feedback has been increased. This hypothesis has been supported by Brief and Aldag (1976), Miles (1976) and is implicit in Schuler's (1979) model.

Walker, Churchill and Ford (1975) infer from their studies that job experience may be a determinant of role ambiguity. They observed that role conflict and ambiguity appeared to decline with job tenure and indicate that time in a position enables the role incumbent to reconcile the role requirements which are mutually incompatible and also allows him to more accurately perceive the expectations of his role senders.

In summary, there has been published, a large amount of literature concerning the determinants and consequences of role conflict and ambiguity. Commencing with the early studies of Gross et al (1958), and Kahn et al (1964), ambiguity and conflict have been shown to be connected with several dysfunctional outcomes, specifically, anxiety, tensions, low performance and satisfaction, and a desire to leave the organisation (Kahn et al 1964, House and Rizzo, 1972, Miles 1976). Several more recent studies have indicated antecedents or determinants of role ambiguity and conflict. Examples of such studies include Miles' (1976) work which investigated the relationships between role conflict and ambiguity and task characteristics (i.e. boundary-spanning activities), Schuler (1977) and Keller, Szilagyi and Holland (1976) who showed the influence of task autonomy and task feedback upon role ambiguity and conflict.

House and Rizzo (1972), and Miles and Perreault (1976), have emphasised the effect of supervisory behaviour, whilst Rizzo, House and Lirtzman (1970) and Tosi and Tosi (1970) researched the influence of organisational structure (e.g. formalisation), upon role perceptions.

Despite the apparent research interest in role perceptions, it is relevant to question whether perceptions of behaviours and activities are important in behavioural science research and whether it is perceptions that should be measured. It may be that a more effective approach would be to measure the actual behaviours and actions exhibited by an employee. In other words, where an individual actually directs his behaviour is more closely related to performance than where he believes he ought to direct his behaviour. Clearly, there should be some association between beliefs and behaviour, but other positive constraints (e.g. lack of skills) may interfere with the translation of belief into behaviour (such as effort expenditure). Lawler and Suttle (1973) have

addressed this issue and their results indicated that role perceptions are closely associated to role behaviour.

Summary

Often the relationship between role ambiguity and employee satisfaction has been shown to be negative. Several factors have been suggested as moderating this relationship, for example, need for clarity and organisational level. The major causes of role ambiguity have been presented including organisational size and complexity, rapid organisational growth, frequent changes in technology, personnel the working environment and the restriction of information flow within the organisation.

Research results to date suggest that role ambiguity results in the role incumbent being more likely to experience dissatisfaction about his work role, anxiety and achieve a lower performance in his job. However, results of studies concerned with the relationship between role ambiguity and performance are inconsistent. Similarly, the relationship between role ambiguity and propensity to leave the organisation has varied across investigations from positive (Ivancevich and Donnelly, 1974) to non-significant (Hamner and Tosi, 1974). Both the Brief and Aldag (1976) study and that of Lyons (1971) found positive relationships between role ambiguity and turnover. The laboratory studies suggest that role ambiguity causes lower productivity, dissatisfaction, tension and psychological withdrawal.

It is important to note that most of the previous research which has investigated role ambiguity has not been directly concerned with role senders (superiors, peers, clients or subordinates), but only indirectly by the measurement of the focal person's perception of ambiguity. An examination of the role senders - focal person relationship (particularly

the communicating relationship) would seem warranted for future research and is taken up in the current study.

CHAPTER TWO

INTEGRATION OF PREVIOUS LITERATURE AND DEVELOPMENT OF THE THEORETICAL MODEL

2.0 Introduction to the Current Research Approach

This section has been designed to introduce the integrated research approach that has been selected for this study. This approach includes components of the three review areas described in Chapter 1, that is, research concerning motivation theory, role perceptions and industrial supervisors.

The study will attempt to account for some of the variation in work motivation of supervisors by the presence and degree of role ambiguity experienced by the role incumbents. In addition to an investigation of the above relationship, the process by which ambiguity may affect motivation will be described.

There appears to be a considerable disagreement amongst both academics and managers concerning the answer to the question whether role ambiguity is or is not a very common element, characteristic of the supervisor's role, (Fletcher 1969, Dunkerley 1975, Child & Partridge 1982). In essence, the question is posed whether or not role ambiguity is always present in the supervisor's role by virtue of the nature of the role. The potential dysfunctional effects of ambiguity upon job satisfaction and, possibly, work performance have been described elsewhere as have the suggested antecedents of role ambiguity. Some of the research cited in the previous chapter indicates that particular organisational levels may be more affected by role ambiguity (in terms of its dysfunctional consequences) than others. However, the

current study will attempt to clarify the process concerning the incidence and level of ambiguity experienced by industrial supervisors. A further objective of this research is to investigate the possible antecedents and the effects of ambiguity upon the supervisor's motivation and job satisfaction.

2.1 The Supervisor, Role Ambiguity, and Work Motivation.

Role ambiguity is usually described in negative terms with reference to its effect upon personal outcomes (e.g. job satisfaction). It seems possible that some individuals may actually prefer the conditions of role ambiguity (uncertainty, lack of role-relevant information) particularly where their role perceptions indicate that a high degree of flexibility and discretion is required for successful task performance and when individuals have high tolerance of ambiguity (and probably a low need for role clarity).

The negative effects of role ambiguity are suggested to affect a supervisor's behaviour in at least three ways. Firstly, if certain aspects of the supervisor's work tasks are unclear to him and his perceptions of the role requirements are inaccurate in so far as they do not conform to the expectations of successful task accomplishment, then it is likely that despite a high degree of application and effort directed towards work tasks, the supervisor's performance will be viewed as inadequate or unsatisfactory. Secondly, when considering the situation where an individual applies a high degree of effort to his work tasks yet receives performance feedback from his immediate superior which he views as unsatisfactory or inadequate, then his motivation to apply the same effort again may conceivably be detrimentally affected. The individual supervisor may then either choose

to discover why such performance occurred by seeking clarification of aspects of his role (e.g. expectations of superior with respect to supervisor's perception of successful task performance) or attempt to reduce the inequity between his perceptions of effort and performance feedback by reducing the amount of effort he applies in the future. A third way whereby the role incumbent's attitudes and behaviour may be affected in a situation of role ambiguity is a result of the individual's need for role clarity (which is closely related to the concept of tolerance of ambiguity). If the individual has a high need for clarity and this need is unsatisfied by the presence of ambiguity in his role, then it is reasonable to suggest that the individual may either seek to improve the level of role clarity or will tend to be less motivated to seek satisfaction from his work role and therefore avoid a condition of dissatisfaction, (where his need for clarity is not satisfied), searching for alternative sources of satisfaction and denying the importance of successful work role performance.

The considerable value of the contribution made by the production supervisor to the effectiveness of a manufacturing organisation in the successful performance of his work role has often been recognised and documented by both academic researchers and practitioners in industrial organisations (Child 1975, 1982, Thurley and Wirddenius, 1973). It seems incongruous therefore for the supervisor's role to have suffered what appears to be extensive role erosion with respect to such aspects as pay differentials, status and responsibility (BIM report 1976). One often-quoted characteristic of the supervisor's work behaviour which is of particular relevance to this study appears to be his lack of drive or motivation. This would suggest that there is a common element or a group

of elements present in the supervisor's role which may be responsible, at least in part, for such an observation. The presence and level of role ambiguity is suggested as one such element.

The major emphasis of this study is directed towards an investigation of those factors, allied to role ambiguity, which are considered to influence the supervisor's work attitudes and behaviour. This approach distinguishes the current research from much previous work in that it focusses upon the antecedents of the supervisor's behaviour rather than the effects of supervisor behaviour upon subordinate's behaviour which is often confined to a study of subordinate's work performance.

The concept of ambiguity, as defined previously by Kahn et al (1964), may be translated into more concrete terms by reference to the "objective" and "subjective" aspects of role ambiguity. One way of describing "objective" role ambiguity would be the amount of adequate role-relevant information available to the role incumbent. This would influence the role perceptions of the individual and, in turn, determine the level of uncertainty/role clarity experienced by him. In this case the role perceptions of the supervisor may be operationalised, in the author's view, with reference to the accuracy of perceptions of the supervisor's role between the supervisor and his immediate superior, from whom we may assume that much role-relevant information derives.

Lyons (1971) argues that such a measure (accuracy of role perceptions) would be more a reflection of "role disconsensus" than of "objective" role ambiguity. However, the role clarity which Lyons described implies some point of reference or ideal (or total) role clarity, where complete and accurate information concerning the role and what is expected of the role incumbent is

available to him. This suggests a communicating relationship between the role incumbent and his superior of the highest quality and effectiveness. It is probable, therefore, that a high degree of role clarity (low "objective" role ambiguity) would be closely associated with a high accuracy of role perceptions between the role incumbent (the production supervisor) and his immediate superior (often the production manager). In other words, the subordinate would be more likely to have similar role perceptions to his superior by virtue of an effective communicating relationship between superior and subordinate, which, in turn, is required to ensure a high degree of role clarity and therefore low "objective" role ambiguity. "Subjective" role ambiguity refers to the "felt" ambiguity experienced by the role incumbent, often expressed in terms of uncertainty or lack of clarity concerning aspects of his role.

The previous discussion serves to highlight the importance of the nature of the communicating relationship between the supervisor and his boss. It appears not only to be influential in the way that the role incumbent perceives his own role (and therefore the accuracy of those perceptions with respect to his superior's perceptions) but also the degree of role ambiguity experienced by him. This line of argument underscores the value of an effective communicating relationship between superior and subordinate. Further evidence concerning the superior-subordinate communicating relationship is provided by the results of the study by Boyd and Jensen (1972), which has indicated that considerable disagreement regarding role perceptions exists between the first-line (foremen/supervisors) and second-line managers. One interpretation of the Boyd and Jensen (1972) study suggests that a poor superior-subordinate communicating relationship may contribute to the considerable disagreement between first-line and second-line managers' role perceptions found by the authors. It is likely that an increase in the

role-clarifying information made available to the role incumbent implies a potential increase in the accuracy of role perceptions between the supervisor and his superior, and in addition a commensurate decrease in the degree of uncertainty (and hence ambiguity) surrounding the supervisor's job.

The three general categories described by Kahn et al (1964) which are considered to contribute to role ambiguity are (a) organisational complexity (b) rapid organisational change, and (c) managerial philosophies concerning communication. It is likely that category (b), rapid organisational change, will occur more frequently within the production or operations function of a manufacturing organisation than in other so-called staff functions (e.g. marketing, personnel, account and finance). Technological changes (new plant, products, machinery, methods or working), personnel changes (rationalisation, redundancies, development, growth) and policy changes all tend to have a more direct, immediate and observable effect within the production function where work activities and task achievement in physical terms are often more visible. Change is particularly apparent within the production supervisor's work system in respect of personnel changes. Growth, rationalisation and technological changes all may affect the number of, and sometimes the type of, (e.g. skill level) shop floor operatives employed by the company and it is common for the supervisor to be directly responsible for managing these changes. Frequent personnel changes also occur, albeit to a lesser degree, at the level of supervisor. The recent growth in the policy of many large manufacturing organisations of employing graduate management trainees at the supervisory level as part of an overall management development programme for potential production managers, introduces a group of employees into the supervisory level whose role occupation is relatively temporary with respect to their less-qualified colleagues.

The nature of supervisory work itself, a major component of which can be viewed as the man-management of shop floor employees, implies today perhaps more than ever before a high level of risk and uncertainty associated with the supervisor's tasks, due in some part to the growth in power and influence of shop floor trade unions. In summary, innovation and change seem to exercise a considerable influence upon the day to day management of the manufacturing operation at the shop floor level and therefore, if we assume that Kahn's (1964) suggestions are correct, contribute significantly to the role ambiguity of the production supervisor. This again prompts the question whether the variation in, and dynamic nature of, the production process and the associated work system necessitates a vague and ill-defined production supervisor's role. The effect of "felt" or "subjective" role ambiguity experienced by the role incumbent may be seen as moderated by the individual's need for role clarity. A high level of role ambiguity suggests a low degree of role clarity (and a high level of uncertainty) and it is the individual's response to such ambiguity that is the subject of the following discussion. Where both an individual's need for clarity and ambiguity concerning his role are both at a high level, then the individual will tend to either "withdraw" or increase his efforts to achieve improved role clarity. The process of withdrawal would, according to Kahn, include a reduction in the individual's perceived importance of task performance and a distraction away from work tasks. In addition, the individual would attempt to achieve satisfaction from alternative sources, perhaps from outside the work situation.

Ambiguity has been described in this study in terms of uncertainty and lack of clarity of role-relevant information. This final term is affected by the transfer of information between superior and subordinate and this transfer is, in turn, determined by the frequency and quality of

communication between the supervisor and his immediate superior. Further, the communicating relationship between the supervisor and his boss is often the medium through which feedback of the supervisor's work performance is transmitted. The supervisor's perception of his performance evaluation may serve as another factor contributing to his work motivation by its influence upon the supervisor's belief that a certain effort level expended upon work tasks should lead to a particular performance outcome. The supervisor may, for example, view his superior's evaluation and feedback of his (the supervisor's) own performance as unsatisfactory in that it does not meet with his personal expectation of what an equitable performance evaluation should be, given that he (the supervisor) has expended what he considers to be an adequate and satisfactory amount of effort directed to the accomplishment of his supervisory work tasks.

2.2 Development of Theoretical Model

The above discussion underlines the suggested influence of several variables which are considered as salient to the subject of the relationship between the role ambiguity of the industrial supervisor and his work motivation (here, defined in terms of his devotion of energy to work tasks). The main elements mentioned in the text which will now form the basis of a preliminary explanatory model are (1) the nature of the communicating relationship between the supervisor and his immediate superior; (2) the accuracy of the supervisor's role perceptions with respect to his superior's perceptions of the supervisory role. That is, the degree of congruence between the supervisor and his boss' perceptions of the supervisory role; (3) role ambiguity as experienced by the role incumbent (in this case the industrial supervisor); (4) the individual's need for clarity; (5) his job motivation; and (6) his overall job satisfaction. The model is not designed to provide a comprehensive explanation of the motivational process of

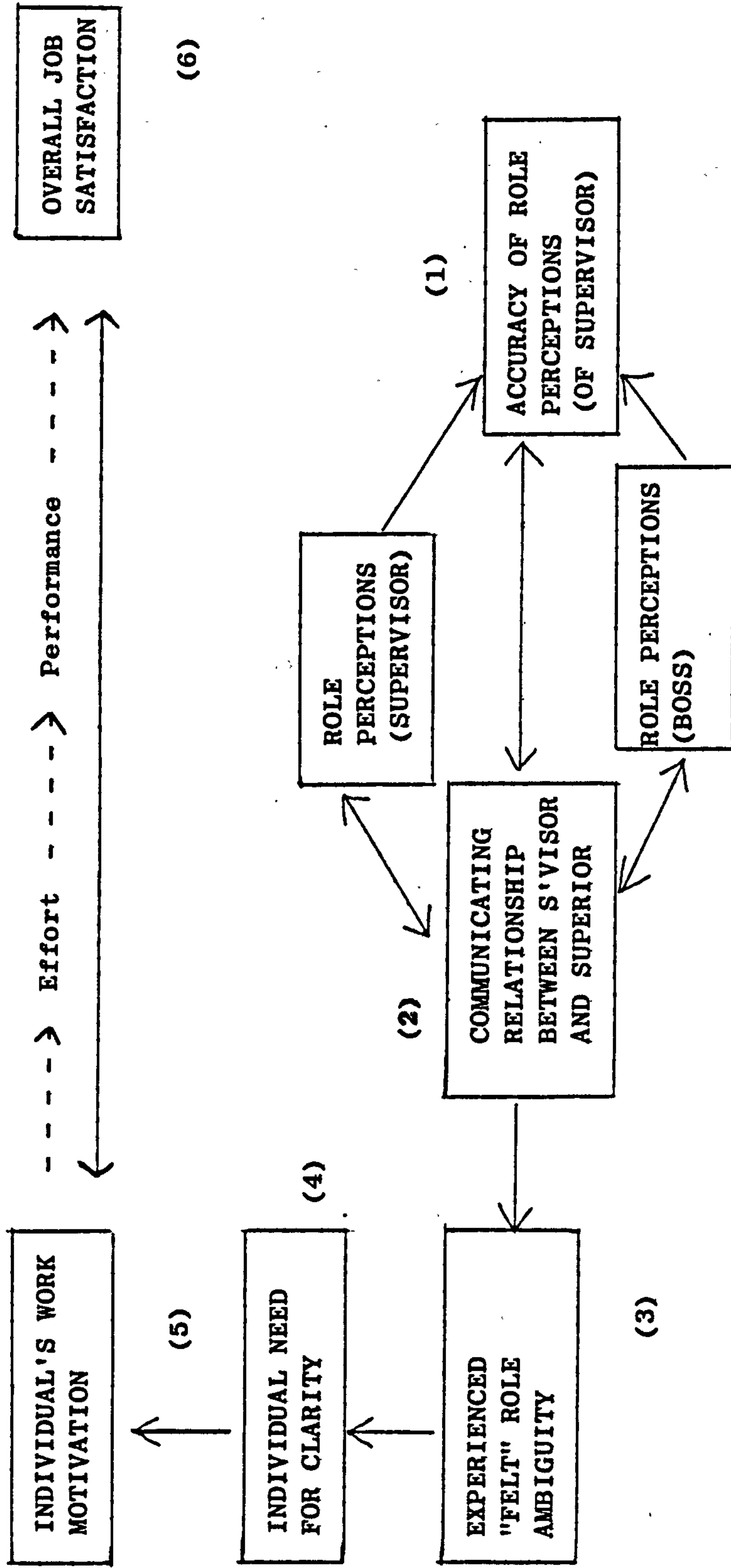
the industrial supervisor. It aims to study the effect and influence of role ambiguity upon motivation. The research approach of the current investigation has been chosen with a view to explaining the relationship between several selected variables rather than the more integrated study of the numerous job role, individual, and organisational factors which are considered to influence the motivational processes operating at the individual level. This issue (i.e. the study of a few selected variables in depth versus an integrated investigation of many variables) has been recognised by Porter and Steers (1979), in their suggestion that an in-depth study of several selected variables and the relationship between them can be as valuable in terms of contribution to research as the many variables approach.

From a company perspective the potential benefits that could accrue from the results of this study, concern the methods which may be employed by companies to reduce levels of ambiguity. This would assume that the suggested dysfunctional consequences of high levels of role ambiguity are discovered.

The model illustrated in Figure 7 described the variables which will be investigated in the current study and the hypothesised relationships between the variables indicated by solid lines. It will be apparent from Figure 7 that the model does not include the focal person's (here the supervisor's) total work role set. As Salancik & Pfeffer (1975) have suggested the major role-sender-receiver relationship in the supervisor's role set seems to be between the supervisor and his immediate superior and therefore the communicating relationship between the supervisor and his boss has been investigated in this study.

Fig. 7

DEVELOPMENT OF THEORETICAL MODEL



The model shows the process by which 'experienced' ambiguity may be influenced and its relationship with work motivation. In many respects it resembled Schuler's (1979) role-perceptions transactional process model (see page 47), in that it focuses upon the relationship between communication, role perceptions and an individuals' attitudes. The main difference between the two models lies in the level of analysis. Whilst Schuler describes organisational communication in its widest context, the model shown in Figure 7 refers to the communication between a subordinate and his superior. Role perceptions in Schuler's model includes both role ambiguity and role conflict, the current model refers exclusively to role ambiguity and the degree of congruence between supervisors' and superiors' perceptions of the supervisory role.

The operationalisation of this model is described in detail elsewhere (page 78 - 100) and the relationships between constructs in the theoretical model and questionnaire items are explained in Figure 10 (page 86).

The double-headed arrows in Figure 7 indicate that the relationships between the role perceptions of both boss and supervisor and their communicating relationship are bi-directional in that the role perceptions of either individual can influence the communicating relationship and vice-versa. It has been mentioned elsewhere how the more "objective" measure of role ambiguity, accuracy of role perceptions (1) may be translated by means of the communicating relationship (2) into perceived ambiguity (3) on behalf of the role incumbent. The effect of "subjective" role ambiguity which is experienced by the role incumbent upon work motivation is suggested here to be moderated by the individual's need for clarity. There may be a high degree of role ambiguity experienced by the role incumbent who possesses a high need for clarity which is therefore not satisfied; the consequences of withdrawal and

and increased effort to achieve clarity have already been discussed. In the other possible cases (low ambiguity and high need for clarity, high ambiguity and low need for clarity, and low ambiguity, low need for clarity) less markedly dysfunctional outcomes are envisaged.

Lyons (1971) indicates that in the situation where an individual's need for clarity is satisfied, there is little or not effect upon the individual's motivation and overall job satisfaction as a result of the level of ambiguity. Withdrawal has been suggested as one alternative outcome when the individual's need for clarity is not satisfied. It may not only have implications for work motivation and overall job satisfaction, but may also detrimentally affect the communicating relationship between supervisor and superior. In addition, the degree to which the level of role ambiguity present in the incumbent's role is experienced by him depends to some extent upon the effectiveness of the superior-subordinate communicating relationship. However, disagreement from an unproductive relationship with a superior may improve the supervisors' feelings of job satisfaction. It is unlikely that this would lead to an improvement in the degree of congruence between supervisors' and superiors' perceptions of the requirements of the supervisory role.

The communicating process may reinforce the individual's feelings of lack of clarity concerning aspects of his role. If the communicating relationship is effective, however, then it seems likely that a clearer reflection of the superior's role perceptions will be presented to the role incumbent which, in turn, suggests that the subordinate has the opportunity to increase the accuracy of his own role perceptions.

The six hypotheses which have been constructed, deriving from the theoretical model presented earlier are now described. They are:-

1. The existence of role ambiguity is a commonly occurring characteristic of the production supervisor's role.
2. Role ambiguity has a significant influence upon the work motivation of the production supervisor.
3. Role ambiguity is negatively related to the job motivation of the supervisor.
4. The effect of role ambiguity upon job motivation is mediated by the individual supervisor's need for clarity.
5. The quality of the communicating relationship between the supervisor and his immediate superior is negatively related to the degree of role ambiguity experienced by the supervisor.
6. Role ambiguity is negatively related to the job satisfaction of the supervisor's in the study.

It is clear that in the case of the above hypotheses not all six statements are equivalent in terms of complexity and detail. The first three hypotheses all concern the main theme of the study, that is, the existence of role ambiguity in the supervisor's role and its influence upon supervisors' work motivation.

CHAPTER THREE

METHODOLOGY

3.0 Introduction to The Research Design and Strategy

The purpose of this chapter is to present the research strategy and design employed in the current study. This section includes a discussion of the scientifically more rigorous "ideal" design and describes how and why this approach has been modified by the practical constraints encountered during the research process (see Figure 8). In addition, the variables comprising the model, introduced in Chapter 2, are defined and the proposed sample and sampling procedure are reviewed in detail, as are the measurement of the variables and data collection methods.

The research strategy has evolved as a result of the development of concepts identified in the review of the research literature (reported in Chapter 1), discussion with academics in the field, with managers in participating organisations, and the influence of the experience of other doctoral theses and their methodologies. The overall strategy involved a two-phase investigation of the supervisor, his role and his relationship with his immediate superior. The two phases here:-

1. A pilot study consisting of a sample of approximately 50 supervisors which provided preliminary data. When this data was analysed it was used to lend support to or led to modification of, the original model, research instruments, and tested the hypotheses outlined in Chapter 2. Interview data was content analysed and questionnaire data analysed by use of non-parametric statistical techniques. Non-parametric

techniques has been employed at this stage as certain requirements necessary for the use of parametric methods were not fulfilled. Firstly, due to lack of data concerning the population (i.e. all production supervisors working in food manufacturing) it seemed inappropriate to make judgements concerning the question of whether or not the sample is drawn from a normally distributed population. Secondly, the scales comprising the questionnaire are described as ordinal. One condition which must be satisfied before any confidence may be placed in the results is that the variables in the study should be measured in at least an interval scale in order to use arithmetic operations on the score.

2. A field study was conducted, involving a survey of a sample of approximately 200 production supervisors and their immediate superiors currently employed in four organisations in three product sectors of the food manufacturing industry. The research hypotheses were tested during this stage of research. Analysis of data again included content analysis, and non-parametric techniques. However, at this stage parametric techniques were also employed for illustrative purposes as the relatively large sample size at this stage indicate that their use was more relevant than at Stage 1.

It is apparent that research methods exert a major influence upon the nature of the outcomes of research activities. The choice of such methods, due to their importance with respect to the results achieved for research, becomes a central decision to the validity of the ultimate research findings. The responsibility of the researcher in the decision concerning methodology is clearly to choose those methodologies which provide the research outcomes with adequate validity and enable the

objectives of the research to be effectively achieved.

A recurrent theme in methodological research work concerns the decision criteria used by researchers to decide upon a particular method of research (Susman and Evered, 1978). A clearly important issue involves the choice of methods used by researchers which are viewed by some academic commentators as convenient rather than particularly relevant (Mintzberg 1979). Whilst recognising the need for academic rigour when using scientific methods, the tendency to choose more convenient methods can be readily understood when considering, for example, the constraints of limited resources which often face the researcher. The more relevant methods, which are often seen as more valid and therefore more academically acceptable in terms of scientific rigour may require more time and financial cost to complete. The data and results which are generated are commonly less readily transferable to those who can use the results most effectively, that is, in the case of research in the management field, practising managers. The problem of relevance and validity of research methods becomes further confounded in the case of field studies when studying the attitudes of employees in their organisational setting. This is largely due to the multitude of situational variables which can influence such attitudes.

The overall design of this research study can be described as comparative in nature, involving a sample of supervisors exhibiting different levels of work motivation and job satisfaction. The research seeks to account for some of this variation by the presence and level of role ambiguity experienced by the role incumbent.

One of the original research objectives of this study was to use the outcomes of the field study to generalise about production supervisors in the manufacturing sector of the food industry. This approach presumed the ability to

identify the characteristics of the total population and the construction of a representative sample from that population. Ideally, the research methodology employed would include a variety of methods of data collection methods such as direct observation, interviews with subjects, questionnaires, and other relevant data sources (e.g. company records of absenteeism and turnover). In addition, a stratified random sample (stratified, for example, by number of employees) of supervisors taken from all companies within the chosen industrial sector would have been consistent with achieving the original objective of generalisation within the food industry. However, in the light of experience gained in attempting to achieve both information concerning the population and access to the sample subjects in companies, the objective has been modified to be consistent with the type of methodology and sample which can be practically employed. This effect is illustrated in Figure 8, overleaf, which compares ideal and actual study designs. The strength of the influence of practical constraints is illustrated by a comparison between ideal and actual designs, and the limitations of research outcomes are identified.

It has not been possible to accurately define the population as no current statistics exist which provide data concerning the total number of production supervisors employed in food manufacturing. The use of the multi-method approach has been considerably handicapped by the constraints of time available to conduct the field research and the refusal by several companies, which have shown an interest in participating in the research, to allow the use of certain methods of data collection for reasons of sensitivity or security (e.g. direct observation, company reports and records). The sample, which is best described as an "incidental" sample, will be taken from those firms willing to participate in the study and has been achieved after several months of consultation.

IDEAL	TYPE OF STUDY	VARIABLES STUDIED	RESEARCH METHODS	SAMPLE	ANALYSIS AND OUTCOME
	Field experiment with control group & certain variable(s) manipulated by researcher. (e.g. level of experienced ambiguity).	In-depth study of 3 main groups of variables. 1. Characteristics of individual supervisor (age, skills, performance, service, attitudes, ability, beliefs). 2. Supervisory work situation (org. climate, management style, work systems, market conditions) 3. Supervisor's work behaviour (tasks, actual performance, relationship with superiors, peers, subordinates)	Multi-method approach. Personal observation of supervisor behaviour & work situation. Company data reports (e.g. performance reviews, appraisals, turnover & absenteeism data). Interviewing. Questionnaire items. Peer, subordinate & superior ratings.	Random & representative sample of supervisors. Control group. Several representative companies in sample. Information concerning population available & comprehensive.	Well-defined, statistically valid statements concerning relationship between the groups of variables defined in the study, analysed by parametric methods and, relating to production supervisors in food manufacturing industry.
CONSTRAINTS	Difficult or impossible to control variables in organisational setting. Selection & control of sample complicated by problems of company access.	Time available for data collection. Company investment (time/money) required for study of variables. Congruence of research theme with company requirements. Sensitivity of company to variables to be measured.	Time allocated to data collection. Sensitivity of organisation to research methods. Need for secrecy. Security of company information. Availability of employees (peer, subordinates) to researcher. Union involvement/agreement.	Access. Details of informal/formal contract with company negotiated to facilitate entry by researcher. Statistics on occupational groups poor or not up to date.	Both analysis & outcome dependent on selected methodology & therefore the type of access negotiated with companies. Time available for fieldwork constrained by activities required to fulfill "access contract" agreed with participating organisation.
ACTUAL	Field study, comparative in nature. Attempt to select groups & individuals in similar work situations. Focus upon supervisors' attitudes at one point in time & attempt to explain major influencing factors.	Limited approach to study of "salient" variables. Investigation focusses on a few, selected variables (perceptions, attitudes and some characteristics of supervisor).	Semi-structured interviews with supervisor & his immediate superior. (Individually). Questionnaire items. Personal evaluation of work situation. Discussion with senior management.	"Incidental" sample. Only companies (and therefore supervisors) interested in research participate. Data on population poor. Sample only random within companies who agreed to participate. Sample for company requirements may include all supervisors in company and their immediate superiors.	Supervisor as unit of analysis. If scientific criteria rigorously upheld then non-parametric techniques must be used. Outcome has limited generalisability due to the "incidental" nature of the sample. Confined to product sectors studied. Reports required to fulfill academic and company requirements (i.e. plant comparison, inter-company comparison).

Initially over 50 companies in the food manufacturing sector were contacted to determine the level of initial interest in the research. Twelve responses indicated a desire to participate and on further discussion concerning the cost and benefit associated with participation, 9 organisations remained willing to participate. The importance of achieving company access and the research "contract" which the researcher negotiates with the company clearly considerably influences the design of any study as has been the case here, and will be discussed in greater detail in Section 3.3 of this chapter.

With reference to the research objectives, it is likely that, considering the type of sample available, the outcomes of the research will have a high degree of relevance only for those product sectors from which the sample has been taken, that is, general food processing (2 companies), flour and bakery products (6 companies), and confectionery (1 company - chocolate and sweets).

Returning to the overall design of the research, a field study has been selected as the type of research approach most applicable to the study of the role of the production supervisor. The advantages and drawbacks of such an approach are now discussed.

As field studies are ex post facto scientific enquiries designed to discover the relationships and interactions between variables in real social and organisational structures, the researcher investigates the social or organisational situation and then studies the relationship amongst the attitudes, beliefs, values, perceptions or behaviours of individuals and groups in situ. A common characteristic of this type of field study is that no independent variables are normally manipulated by the researcher, however, this potential disadvantage may be more than compensated for by the fact that this sort of study has

the advantage (over an experiment, for example,) of a high degree of realism, in that it investigates the role of the supervisor in his actual organisational setting. Furthermore, the variance of many variables in field situations can often be large when compared to the variance in laboratory experiments.

The view that this type of research is of more pragmatic significance than others does not necessarily lead to scientific significance, and the author recognises the relatively weak scientific position of such a field study as this in comparison with, say, a laboratory or field experiment. Much of the apparent lack of scientific precision associated with field studies seems to be partly due to the degree of complexity the researcher encounters in the field setting. For example, the recent history of the organisation with respect to organisational change, market influences, profitability, unionisation and trades union activity, and technological change are all important data to the researcher as they may indirectly influence the behaviour and attitudes of subjects in the sample. Perhaps additional criticism could be directed toward the superficiality of field studies when compared to experimental design.

Whilst presenting what seem to be some of the disadvantages and benefits of field research in comparison with other methods, reference to value judgments are not particularly helpful in highlighting the differences. Indeed, it may be more useful to consider rather the relevance and applicability of the selected research methods in meeting the research objectives or solving the proposed research problem. The selected methodology has therefore to be consistent

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with research objectives. In this case this involves clarification of the question of whether or not the occurrence of role ambiguity is a common element in the production supervisor's job, investigation of the relationship between role ambiguity and work motivation, and examination of the process by which role ambiguity influences motivation.

The model that was introduced in Chapter 2, provides the basis of an explanation of this process. The proposed link, illustrated in the model, between role ambiguity and work motivation is further elaborated in the working hypotheses.

The selected research approach directs attention upon one role in the organisational hierarchy, that of the production supervisor or foreman. Whilst the individual supervisor remains the primary unit of analysis, the communicating relationship he shares with his immediate superior and his superiors' perceptions of the supervisor's job are both examined. The term supervisor and foreman are used inter-changeably here, as they often are in industry, and are both defined as that level of first-line management which has direct responsibility for the organisation and achievement of shop floor labour and production targets.

Whilst the production supervisor in the United Kingdom seems to be the poor relation when compared with the same role in the United States in terms of research directed towards the role, role development over time has been as rapid and extensive here as abroad. Legislation and growth of the influencing power of union representatives, for example, have a more observable impact at the supervisory level than perhaps anywhere else

in the organisation. The need for research in this area has been discussed in earlier chapters; the specific rationale underlying this research study lies in the need to understand firstly, whether it is common for supervisors to suffer from both role ambiguity and a lack of drive or motivation as is often reported. Secondly, the research aims to explain aspects of the motivational process of the supervisor, and the role which ambiguity plays in that process.

3.1 Sample and Sampling Procedure

The food manufacturing sector of industry (excluding beer, wines, spirits and soft drinks) was chosen as the industrial setting where the research was performed on the basis that, (a) initial observations by the author, which have initiated the current study, took place during industrial experience in this sector, (b) this sector has received relatively little research attention in comparison with others (e.g. engineering industry), (c) it was envisaged that organisational access and entry would be more readily and effectively achieved due to the author's previous experience in the industry, and (d) research findings would be more readily interpreted due to the author's understanding of similar organisational cultures.

As mentioned elsewhere a sample of supervisors was taken from those companies wishing to participate in the study. This sample size was limited by the time available for field research (both interviewing and administration of questionnaires), bearing in mind that whilst this study's sample contains over 100 subjects, some of the companies participating in the study required (for their purposes) data concerning all supervisors in their organisation.

None of these companies have been chosen at random from a total list of all companies in this sector and the sample is therefore described as "incidental". They are those companies (out of the 50 approached) who have shown a desire to participate in the research study and are prepared to invest the time of their managers and supervisors in order to obtain information concerning the attitudes of their production supervisors and the supervisors' relationships with their immediate superiors.

All are contained within Table 2 showing distribution of employees by product sub-sector. They are classified under confectionery (chocolates/sweets - 1 company in sample), general food processing (2 companies), and flour and bakery products (plant bakeries - 6 companies). In this case knowledge of the characteristics of the population (all production supervisors in food manufacturing) is poor. However, if it is assumed that approximately 50% of all supervisors in the total figure (shown in Table 2) of 43505 are production supervisors, and further that there has been no significant growth in the total number since 1976, then the total population consists of approximately 21000 supervisors. Whilst only three product sectors are to be investigated, these together account for over 12,000 supervisors in the total population. In terms of total numbers of employees in these sectors, the three together provide over 300,000 jobs out of a total of approximately 761,000 in all product sectors.

Initially, a simple random sample of no more than 180 production supervisors was to be selected from a total list of all production supervisors within the 9 organisations studied of approximately 260. The decision to select a maximum of 180 supervisors for the sample was made in consideration of the contact time available to conduct this field research stage. An

TABLE 1 DISTRIBUTION OF SUPERVISORS ACROSS PRODUCT SECTORS SAMPLED *

<u>FOOD MANUFACTURING</u>	
<u>TOTAL ALL SECTORS</u> (excluding beer, spirit, wine and soft drinks).	21752
<u>PRODUCT SECTORS SAMPLED</u>	
A. FLOUR AND BAKERY PRODUCTS	5326
B. CHOCOLATE AND SWEETS	1602
C. GENERAL FOOD PROCESSING	5277
Total Product Sector Production Supervisors.	12205

(* Source: Personal Communication - Food, Drink and Tobacco Industry Training Board, 1980)

TABLE 2

NUMBER OF EMPLOYEES IN OCCUPATIONAL GROUPS

(As at April, 1976)*

PRODUCT SECTOR	MANAGERS	SUPERVISORS	CRAFT OPERATIVES
Meat & Meat Products	3275	6906	54787
Biscuits & Cakes	1500	2938	36179
Flour & Bakery Products	4474	10653	83588
Chocolates & Sweets	2468	3204	49353
Dairy Products	3790	7394	37263
Fruit/Fish/Vegetables	1731	1855	21792
General Food Processing	9908	10555	97622
TOTALS	27146	43505	380584

Definitions.

Managers: Those engaged in the direction and control of activities of an organisation.

Those whose duties are essentially concerned with establishing objectives, deciding priorities and devising and implementing the means to carry them out and assess the results.

Supervisors: The first line of management. Those responsible for the efficient use of labour and material resources. Their main activity is the direct supervision of men or machines (e.g. office supervisor, production foreman).

(*Source: Food, Drink and Tobacco Industry Training Board,
Personal Communication , 1980)

Craft Operatives: This group comprises those who have undergone a recognised period of apprenticeship or equivalent training and those employing a narrow range of manual skills.

optimistic estimation of the time required to complete interviewing and questionnaire administration was a minimum of between 8 and 10 weeks. This stage of the research comprised the second step in the research programme as outlined in Section 3.0 (page 66). The first stage included the initial piloting process where exploratory data was collected within several organisations (not taking part in the main survey) using, again, the methods of interview and questionnaire. During this stage contextual information concerning the supervisor's work environment was collected (e.g. his perceptions of the organisational climate, management style). The pilot sample contained over 50 production supervisors and their immediate superiors within those organisations participating in the pilot study.

The data gathered at this stage of research were analysed to assess whether or not the preliminary hypotheses were supported and to determine if the data collection methods (and measuring instruments) were adequate in meeting the purposes of the study. The theoretical model, hypotheses, and research methods were subsequently refined and developed as a result of the findings of the pilot study.

To summarise the research process presented in the previous two sections (3.0 and 3.1), this work may be classified as a field study, the aim of which was to investigate supervisors in their work environment, their levels of motivation and the part played by role ambiguity in influencing their motivation. However, according to the definition of field studies by Katz, such a study may be termed exploratory. The main purposes, according to Katz, of an exploratory study should address the following issues. Firstly, the research should discover significant variables in the field situation. Secondly, it should lay the foundations for later, more systematic and rigorous

hypothesis testing. The current study appears to conform to this iterative model of research, the initial stages encompassing such activities as pilot study data collection and preliminary hypotheses testing. Both activities are designed to highlight significant variables.

3.2 Achieving Organisational Access

The process of negotiating access with each of the three companies involved in the pilot and main study can be subdivided into three stages:

1. Initial Approach/Company Contact
2. Preliminary Discussion/Meeting
3. Agreement of Final "Research Contract"

The first stage concerned the decision of which method of organisational contact would be most effective. After discussion with experienced researchers in the field, it was decided that a letter be written outlining the research and possible research outcomes (and benefit) including a structured research proposal. This letter was sent to 50 companies taken at random from a list of companies from the food manufacturing sector of industry.

The research proposal described the research process in detail, outlining the time investment required from each supervisor (approximately 2 hours) and manager (approximately 1½ hours), the content of interviews and questionnaires, the methods of data analysis, and feedback of the results.

Initial responses to the first batch of 20 contact letters resulted in 8 negative responses and the offer of one meeting, which subsequently failed to achieve any real commitment from the company in question. This disappointing result prompted the author to modify the introductory letter which, in the revised version, shifted the focus of attention from the research to the researcher, his industrial experience in the production function in the food industry, and his academic experience. This change was employed to establish the author's credibility as an individual with the qualifications and background appropriate to the research subject. The second letter

produced a significantly improved positive response. Of the second group of 20 letters sent, 12 positive responses were received, 9 of which expressed a clear interest in participating in the study. This interest later led to meetings between the author and organisational representatives who were usually the personnel director and/or production director or senior manager.

Figure 10 summarises the factors the author considers have been most significant in influencing the achievement of organisational access. In addition, it is noteworthy to reinforce the importance of describing the potential organisational benefit (see 3.2) in the light of subsequent experiences in achieving research access to organisations. Senior managers, at least within those companies with which the author has conducted research, are clearly concerned that any research involving individuals external to the organisation should be closely linked to the solution of an existing organisational problem or the achievement of an outcome of direct benefit to the company and those individuals participating in the study. This situation may have been exacerbated by the currently difficult trading position of many companies and the prevailing economic climate.

With reference to the three stage process of achieving access, Stage 2 has provided some insights into the process from which future researchers in the same subject area may benefit. It has proved most effective to contact senior executives in the functional areas of Personnel, Training or Management Development. Thereafter, meetings have often involved senior operations/production managers who are several levels removed from second-line production managers and supervisors. If initial meetings could have been arranged which included managerial representatives from both functions, then this would have considerably

Fig. 9 Factors Affecting Organisational Access

1. Point of Organisational Contact: The level of the contact person in the organisation's hierarchy. It was found that personal contact with more senior management (usually director level) has been more successful in achieving access than contact at a lower level in the organisation.
2. Company Cost and Benefit: The cost of participating in the research for the organisation in terms of investment of resources, and the value of the benefit of the research outcomes.
3. Attitude of Contact: The attitude of the contact individual to the value of the research bearing in mind environmental conditions (e.g. market conditions, economic climate) and the experience of the organisation of participating in previous similar research activities.
4. Demonstrating Researcher Competence/Expertise: The ability of the researcher to demonstrate competence and expertise in an area relevant to the research study.

speeded up the process. Also, the involvement of worker representatives at an early stage in the research relationship has proved effective.

Stage 3, that is the agreement of the final "research contract", was primarily concerned with achieving agreement between both parties on the nature of the research relationship. In short, the "research contract" comprised a clear statement of the requirement in terms of investment (of time and other resources) from each party and how the outcomes of research could be mutually acceptable in terms of benefit.

From the author's viewpoint, it was of paramount importance that the academic research outcomes be as congruent as possible with those required by the organisation in order that the time available for fieldwork be utilised most effectively. For example, one organisation defined a research objective as an "attitudinal position audit", examining the current attitudes of supervisors to their work situations generally. This was close to the author's own research interest and there was therefore a high degree of congruence. The main difference between research ideas was that organisations sometimes preferred that every supervisor in the plant were interviewed, whilst the author's ideal design concerned sampling one out of every two supervisors available for interview. In practise, on average over 75% of all supervisors and managers in the organisation was interviewed. This was a result of a compromise between the author's preference, the organisation's preference, and the practical constraint of subject availability (holiday, sickness, high priority work activity - attending to breakdowns).

The final phase of the process demonstrates the concessions which may have to be made in order to achieve research access in organisations. There are clearly some limits

to the degree of compromise the researcher can accept and the definition of these limits becomes one of his or her responsibilities. The author's experience of negotiating organisational access was that each company required that an individual company report be written summarising the findings of the study for each company.

The experience of this study leads the author to conclude that achieving access to organisations may confront the researcher with an unattractive, but inevitable, compromise between research effectiveness, validity, and rigour, and meeting the participant company's research need. The problem of achieving company access has proved to be an extremely difficult one to solve and the time-consuming nature of solving the problem should not be underestimated. The difficulty of the problem may have been increased by the current economic recessions and the "healthy scepticism" many managers have concerning the practical benefit which may be derived from studies such as this.

The issue of company access is perhaps further confounded by the nature of the subject of the study. In many cases research outcomes in the behavioural sciences appear relatively unattractive when compared with the more well-defined outcomes which can be offered by researchers in the other functional disciplines of marketing, finance, operations and business systems. One example of the attractiveness of research outcomes is demonstrated by the monetary value which can be assigned to current market research information.

It is clear from the preceding discussion that no matter how arduously the field researcher works to design a rigorous, well-defined research programme, the issue of achieving access to his data (i.e. company access) can override the priorities of academic criteria which may, initially, have been of prime importance.

The subjects, for example, in this study were sampled from supervisors employed in those companies willing to participate in the research and which value the benefits which may be accrued from the research outcomes. If, as was initially hoped, generalisations concerning production supervisors in the food manufacturing sector were presented after the results of the study are analysed, then this would seem to be rather less valid than if all subjects were chosen at random from the whole population. It is also important to note that the companies who were prepared to participate in the sample differ from other companies which were not, by virtue of their different responses to the research proposal.

The difference between companies which have cooperated and those which have not illustrates the problem researchers face when considering the issue of generalisability of results. It is possible that the lack of willingness to participate in a research study may be as a result of some organisational characteristic which differentiates the organisation from other, participating organisations. The issue of generalisability of results, therefore, becomes more controversial.

3.3 Data Collection Methods

The choice of the methods of interview and questionnaire was made as a result of an attempt to optimise the effectiveness of the proposed research in the light of several constraints. These include the time available for data collection, and the willingness of senior managers in participating organisations to invest subordinates' time in the research study. The latter constraint has had a considerable impact upon the design of the research. Whilst attempting to meet academically rigorous research criteria, the researcher is often presented with

conflicting demands from the more pragmatic practising manager whose preference is for realistic, implementable solutions to current organisational problems.

The interviews which took place were semi-structured in nature and were conducted before the questionnaire was administered. Both the supervisor and his boss were interviewed and questioned on such issues as management style, work practises, company policies, and other contextual variables relevant to each work environment, such as reward practises, career development and planning. In addition, some of the variables discussed during interviews were measured by questionnaire items. These variables are those which comprise the theoretical model presented in section 2.2 (page 54). Following the completion of interviews and questionnaires, the data was collated and content analysis performed upon interview data. Statistical analysis was performed upon data generated by questionnaire responses. The methods of data collection consisted therefore of semi-structured interviews with both supervisors and their immediate superiors using pre-planned discussion issues, and questionnaire items. It was envisaged that data gathered during interviews would represent a source of data complimenting that gathered through responses to the questionnaire items. The relationship between the theoretical constructs presented in the model (page 56) and items comprising the questionnaire are illustrated in Figure 9.

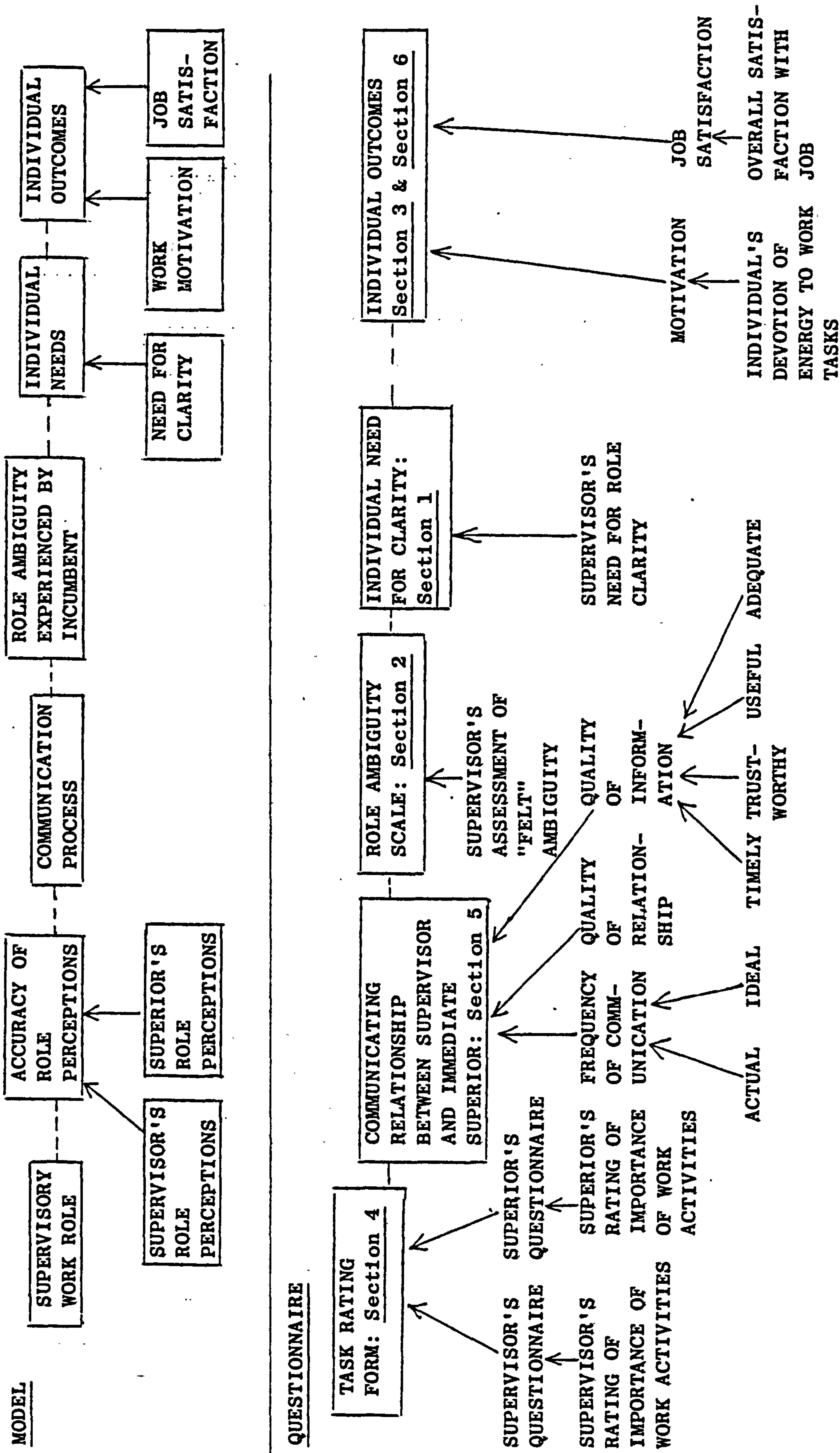
The research questionnaire which were administered to supervisor and manager are presented in Appendix 1 and 2, respectively.

The interviews with each supervisor were semi-structured and certain common issues were discussed during the course of interviews and the subjects' attitudes and experiences concerning these issues were noted. The remainder of the

Fig. 10

EXPLANATORY DIAGRAM SHOWING RELATIONSHIP BETWEEN CONSTRUCTS IN THEORETICAL

MODEL AND QUESTIONNAIRE ITEMS



of the interview, after discussion of these common issues, was devoted to a discussion of subjects raised by the supervisor which he felt were important aspects of the supervisory role, and which had not previously been discussed. The subjects listed below constitute the specific issues discussed during each supervisory interview.

1. Orientation/Group Allegiance/Group "Membership".
2. Recruitment/Selection/Development of supervisors.
3. Communicating Relationship with Immediate Superior.
4. Significant changes in the Supervisory Role over the period of the subject's work experience in that role.
5. Sources of Job Dissatisfaction/Satisfaction.
6. Level of Work Motivation.
7. Relationship with Subordinates.
8. Level of Role Ambiguity/Uncertainty/Lack of Clarity experienced by the subject concerning aspects of his work role.
9. Status, Authority and Responsibility of Subject in his Work Role.

These issues were selected to meet two objectives. Firstly, to provide an alternative method of measuring those variables in the supervisory questionnaire. Secondly, to provide data concerning contextual factors and those variables which may be described as related or associated with the main variables in the theoretical model. For example, major changes in the supervisory role may help to explain attitudes of the supervisor towards certain issues. One common example would be the growth in automation and mechanised production facilities generally which is often thought to have reduced the level of "craft" or "skill" in the production process. This may have relevance to the levels of job satisfaction of supervisors who have previously derived much of their satisfaction at work from their involvement in what they see as "skilled" activities.

Orientation is another issue included in the list of discussion topics as an aid to examination of the supervisor's role perceptions. It seems more likely that those individuals who express a belief that they occupy an organisational role located right in the middle between management and workers, and who receive conflicting demands from both groups, may be among those who experience higher levels of role ambiguity with management or the shopfloor work group. Those variables discussed which are described as "related" variables further contribute to achieving the objectives of research in that they may lead to a clarification of the supervisory role. For example, an examination of the thesis that the supervisor is the "man in the middle" (a popular belief amongst managers and some researchers) has been facilitated by the discussion of orientation, group allegiance and group membership with supervisors. These discussions may further shed light upon the proposition by Child et al (1979) that line supervisors are in a position that is only marginally superior to that of manual workers.

These interviews conducted with the supervisor's immediate superior (called "managers" from now on, even though some were called assistant managers or superintendents) consisted of a similar process (which will be described shortly), but the major issues for discussion were restricted to those areas of the manager's role which concerned supervisors. The issues discussed were:-

1. Management style of manager with particular reference to the task of managing supervisors.
2. Manager's criteria for effective supervision.
3. Manager's perceptions of the supervisor's role.
Discussion of what the manager felt were the most important task elements of the supervisor's role.

All three issues concern the manager's perceptions of aspects of the supervisory role, how the supervisor is managed, what are the criteria for effective supervision, and what are the most important task elements of the supervisors role. They are, therefore, valuable data in the process of comparing perceptions of the supervisory role (and aspects of the supervisory work situation) between subordinate and superior. In addition, the degree of agreement between the two can be compared with the variable which measures the accuracy of role perceptions from questionnaire data. Figure 11 explains the shorthand forms of all variables in the theoretical model and the method which has been used to translate questionnaire items into the composite variables described in the model.

Whilst the previous discussion concerns the content of interviews with supervisors and managers, the following section focusses upon the process the author has followed in conducting interviews. The explanation of the process and content of interviews is presented in an attempt to provide sufficient detail in order that future researchers may apply comparable methodological procedures. Heise (1972) points to this issue in his research which suggests the lack of procedural detail as one factor leading to the situation where different researchers, applying similar methodological procedures to the same data came to conflicting conclusions.

The interviews with supervisors and managers were predominantly similar in that they followed the same overall pattern as described in the sequence overleaf.

Fig. 11 Key to Shorthand Forms of Variables in the
Theoretical Model and Employed in Analysis
of Questionnaire Data

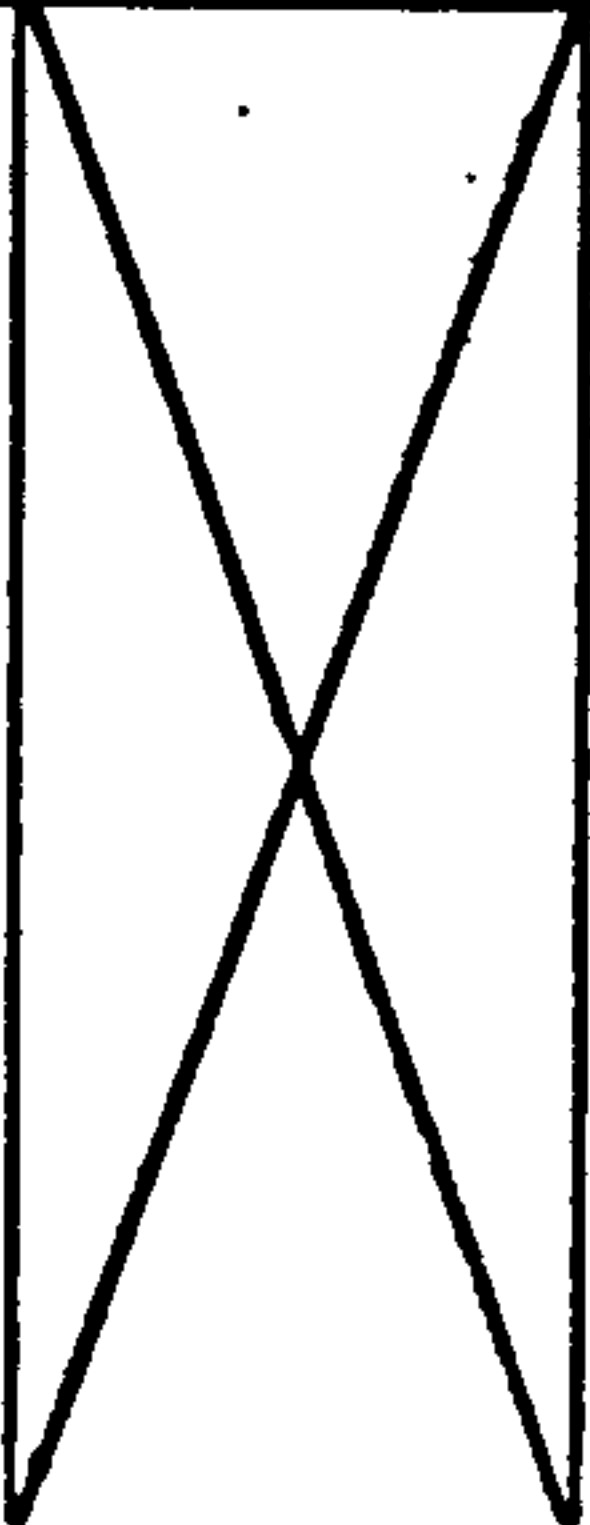
<u>VARIABLE NAME:</u>	<u>SHORTHAND FORM:</u>	<u>COMPUTED BY:</u>
1. JOB MOTIVATION	JOBMOT	Σ (Items 1 - 4 Section 3*) ¹ Σ R (Items 1 - 16 Section 3*) ²
2. JOB SATISFACTION	JOBSAT	Σ R (Items 1 - 7 Section 6)
3. NEED FOR CLARITY	NCLARITY	Σ ¹ (Items 1 - 4 Section 1)
4. ROLE AMBIGUITY	ROLAMB	Σ R (Items 1 - 14 Section 2)
5. ACCURACY OF ROLE PERCEPTIONS OF SUPERVISOR (MANAGER) ³	DROLPER	Σ ABS (Item 1sup Item 1mgr) + ABS (Item 2 sup - Item 2 mgr)+.... ABS (Item 34 sup Item 34mgr) Section 4 of Supervisory Questionnaire & Manager's Questionnaire
6. QUALITY OF COMMUNICATING RELATIONSHIP	QUALCOM	Σ R (Item 1 - Item 2) + Item 3 Section 5
7. RELATIONSHIP BETWEEN MANAGER AND SUPERVISOR	RELNBOS	Item 4 <u>Section 5</u>
(* Section number refers to		R = reverse score)
(Questionnaire		appropriate items.)
(1 Patchen Scale (Pilot Study)		3 = Item 1mgr to 34mgr)
(2 Modified Scale (Main Study)		comprises the)
(Managers Questionnaire)
		(Task Rating Form))

- 51
- A. Introduction of researcher and study to the interviewee - the objectives, methods and outcomes of the study.
 - B. Discussion of major issues (as defined previously), the main aim being to elicit attitudes towards issues.
 - C. Discussion of aspects of the supervisory work system which the subject decided were most important. (Assuming these were not covered in B above).
 - D. Description/Explanation of the supervisory and management questionnaire by the researcher, and discussion of its content, use, confidential nature and value as a research instrument.
 - E. Distribution of the questionnaire to each subject. Each individual was given a questionnaire and a reply-paid envelope addressed to the author at the conclusion of each interview.

The interviews have been described as semi-structured and, according to the typology illustrated in Table 3, fall into the top right-hand quadrant of the diagram (I). This type of interview allowed the respondent to answer a pre-planned set of questions in any way he chose. The supervisory interviews took at least one hour (up to a maximum of 3), and on average 1½ hours to complete. Interviews with managers lasted typically, one hour and never exceeded two hours duration.

One of the main research objectives during this phase of the fieldwork was achieving a situation where subjects could respond openly to questions about their work, their experience, and their attitudes to work. Much research effort was directed towards the successful achievement of this goal.

TABLE 3 A TYPOLOGY OF INTERVIEW STRATEGIES (Taken from Stone, 1978)

RESPONSE POSSIBILITIES		INTERVIEW ITEMS	
		UNSTRUCTURED	STRUCTURED
	UNSTRUCTURED	UNSTRUCTURED INTERVIEW	SEMI- STRUCTURED INTERVIEW (I)
	STRUCTURED	SEMI- STRUCTURED INTERVIEW (II)	STRUCTURED INTERVIEW

The method of encouraging feelings of trust in the interviewee will now be discussed. The author considers that the issue of trust and personal risk is crucial in terms of the role they play in the collection of accurate data using interview techniques. In many cases, supervisors arrived at the interview room with little knowledge of the objectives or process of the research study. They had commonly only been informed that a researcher would be interviewing them about their work and that they should make themselves available for interview at a specific time. Often, the first task facing the author in conducting the interview was to answer subjects' questions concerning the reason for his presence in the interview room. The scope and content of the study was explained and its independent and confidential nature described. The distinction between the research and consultancy role was clarified to the subject by the author, emphasising the fact that no fees were payable to the author for his involvement with the organisation, and therefore he was independent of the company and its management. The final company report was described as one research outcome. The author confirmed that he guaranteed confidentiality of the report in that no individual supervisor or manager (or any one department/section) could be identified from the report.

The second issue normally discussed in the supervisory interview was the potential "pay off" which could be received by an individual as a result of participation in the study. Indeed, the prospect of a company report as an outcome of the research is not one which could be seen to benefit (and therefore be attractive) to many supervisors. The fact that a report concerning the

attitudes and experience of the supervisory group in the company was to be produced and passed to senior managers was not an outcome which elicited an enthusiastic response from supervisors. However, when described in terms of "the opportunity to communicate (albeit initially one-way) directly with senior managers" and to "get your voice heard", it became something seen by many subjects as worthwhile and of possible benefit to themselves. As a further element in the discussion of the research study, supervisors generally agreed that given the provision of accurate information one is more likely to reach better quality decisions than if less accurate information is provided. The research study was then referred to in terms of a process for collecting "accurate" information, analysing it, and presenting the findings to those individuals concerned with making decisions within the organisation.

Another component of the first stage of the interview was a brief summary of the author's practical experience in the field under study. That is, reference to the author's first-hand experience of the supervisor's role (in the production function) in the food industry, and a demonstration of his understanding of the supervisory work system. This often encouraged a short mutual exchange of experiences, often anecdotal, between the subject and the author. To summarise the first stage of the interview with supervisors, the following parts can be identified:

1. Explaining/Describing the study.
2. Trust building. An attempt to reduce the subject's anxiety - often concerned with personal identification.
3. Establishing the credibility of the author through a summary of personal experience in the supervisory role.

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4. Emphasising the importance of discussing both positive and negative (favourable and unfavourable) aspects of the supervisory work system referring to both the human and technical elements of the system. In addition, mention of the dependence of the success of the study upon the integrity of subjects was made.
 5. Determining the personal benefit which may be derived by individual subjects through participation in the study and the importance of collecting "accurate" data (and therefore a true reflection of subjects' attitudes to their work).

Stage 2 comprised a discussion of the major issues (listed previously), where the open-ended interviewing method was employed, asking predetermined questions yet allowing the respondent a free choice in response. The form of the questions used during interviews is presented in Figure 12 categorised under each subject. Although each subject category was introduced to the interviewee in the form of a question, the subsequent discussion was as rich in data as responses to specific questions. Both aspects of the data above will be analysed and reported in the following chapter. That chapter includes a presentation of the analysis of questionnaire data. Whilst the largest proportion of the following chapter (in terms of volume) is directed towards a report of analysis of interview data, the author views the analysis of questionnaire data as possessing equivalent value to the analysis of interview data.

The method of analysis which has been applied to the interview data is content analysis. This technique involves the arrangement of interview data into subject categories and assigning an assessment of attitude towards that subject, in this case either favourable (positive), neutral, or unfavourable (negative). In

Fig. 12 Form of Interview Questions Classified
by Subject Category

1. ORGANISATION/GROUP MEMBERSHIP/GROUP ALLEGIANCE

- (i) As a supervisor, to which group do you feel more closely associated - management, group between management and workforce, shopfloor work group?
- (ii) Of which group would you say you were a member?
- (iii) Do you feel any allegiance to any one group? If so, which one?

2. RECRUITMENT/SELECTION/DEVELOPMENT OF SUPERVISORS

- (i) What do you feel are the most important skills and abilities a person should have if he is to become a successful supervisor?
- (ii) If you were selecting a supervisor what sort of background experience would he have?
- (iii) How are supervisors selected/recruited/trained/developed in the company? How do you feel about this?

3. COMMUNICATING RELATIONSHIP WITH IMMEDIATE SUPERIOR

- (i) How would you describe the way you and your immediate boss communicate?
- (ii) What information do you receive from your boss on a regular basis? Do you feel it is adequate/useful/timely/trustworthy?

4. SIGNIFICANT CHANGES IN THE SUPERVISORY ROLE

- (i) What do you feel are the major changes that have occurred in your job/the company since you first became a supervisor?

5. SOURCES OF JOB SATISFACTION/DISSATISFACTION

- (i) What do you feel are the major sources of job Satisfaction/Dissatisfaction for you in your job?

6. LEVEL OF WORK MOTIVATION

- (i) How motivated do you feel in your work?
- (ii) How much effort do you put into your job? Could you put in any more?
- (iii) What sort of things do you think affect your level of motivation at work?

7. RELATIONSHIP WITH SUBORDINATES

- (i) How would you describe your relationship with your subordinates?

8. LEVEL OF ROLE AMBIGUITY/UNCERTAINTY/LACK OF CLARITY

- (i) Do you ever feel a lack of clarity/uncertainty in your job? Is this common? When do you find yourself in such situations?

9. STATUS, AUTHORITY AND RESPONSIBILITY OF SUPERVISOR

- (i) What status do you feel you have in the organisation? How do you feel about that?
- (ii) How much authority do you have in your job? How do you feel about that?
- (iii) How much responsibility do you have in your job?

TABLE 4

DATA BASE VARIABLES

<u>VARIABLE DESCRIPTION</u>	<u>VARIABLE TYPE</u>
1. RELATIONSHIP BETWEEN SUPERVISOR AND SUPERIOR.	INDEPENDENT/METRIC
2. QUALITY OF COMMUNICATING RELATIONSHIP.	INDEPENDENT/METRIC
3. ACCURACY OF ROLE PERCEPTIONS.	INDEPENDENT/METRIC
4. ROLE AMBIGUITY.	INDEPENDENT/METRIC
5. NEED FOR CLARITY.	INDEPENDENT/METRIC
6. JOB MOTIVATION.	DEPENDENT/METRIC
7. JOB SATISFACTION.	DEPENDENT/METRIC

this study the author has arranged all interview data into subject categories and determined the nature of the interviewee's attitude from interview notes and comments made by subjects during interviews. . . In the following chapters the author has selected representative comments made by interviewees which were thought to be typical of a group of similar attitudes elicited from different individuals.

The research questionnaire used during initial data collection is attached in Appendix I of this thesis. A summary of the methods by which the above variables are measured (and the relevant questionnaire sections) follows below.

Need for Clarity Index (Section I)

This measure has been chosen as the most relevant, reliable and valid instrument currently available which assesses the individual respondent's need for clarity concerning his work role. The measure concerns the role incumbent's evaluation of the importance of knowing, in detail, how to perform a job, what comprises that job, what the limits of the individual's authority are, and the importance of performance feedback to the job incumbent. The index was developed by Lyons (1971) and consists of four items each with five alternative responses ranging from "extremely important" to "not at all important". This variable is scored so that a high value indicates an individual with a high need for role clarity, and a low value an individual with a low need for clarity. Lyons reports that intercorrelations of items within his sample were positive and significant, with a median r of 0.38. The Spearman-Brown split-half reliability for the index was estimated by Lyons to be 0.82.

Role Ambiguity (Section 2)

The 14 items used to measure role ambiguity are taken from the Rizzo et al (1970) scale, which has been shown to be factorially identifiable and independent from role conflict. This scale has been a commonly used scale by researchers for the measurement of role ambiguity since its construction in 1970.

The variable measures an individual's perception of role ambiguity as experienced by the incumbent in his work role. Role ambiguity has been defined by Rizzo et al in terms of the "predictability of the outcomes or responses to an individual's behaviour and the existence of clarity of behavioural requirements which may serve to guide behaviour and provide knowledge that the behaviour is appropriate". Responses to the items in the measure therefore represent an individual's subjective assessment of certainty concerning his duties, authority, time allocation, and relationship with others in his work environment. In addition they reflect the clarity (or lack of clarity) concerning company guidelines, directives, and policies and the incumbent's perception of his ability to predict the outcomes of his behaviour. In other words, role ambiguity can be seen as the lack of clarity of role expectations and the degree of uncertainty regarding outcomes of role performance which an individual experiences.

Subjects in the sample are requested to indicate the extent to which each statement in the section is an accurate description of their job situation. Response alternatives are arranged on a 5-point scale ranging from very true to very false. Internal consistency estimates of the reliability of the measure have been calculated in excess of 0.80 (Miles, 1975).

Schuler, Aldag and Brief (1977) examined the properties of the role ambiguity scale developed by Rizzo et al (1970) and consistent support was found for each scale across six samples. All the internal consistency reliabilities exceeded Nunnally's (1967) criterion of 0.5 to 0.6, with those in all but one sample exceeding 0.7. The authors recommended that future research using this role ambiguity scale be directed at several issues in role perception research. They include investigation of the individual moderators of the perception of the responses to role ambiguity, and the relationships between "objective" and "subjective" levels of role ambiguity, both of which are directly relevant to the current study in that both subjective ("felt") ambiguity (using the Rizzo et al scale) and "objective" ambiguity (by means of an index of role perceptions) are measured.

Job Motivation (Section 3)

The job motivation measure employed here is Patchen's (1965) index. The items in this section attempt to

measure the level of aroused motivation on the job, from the standpoint of devotion of energy to job tasks, which is the most useful measure of motivation with respect to this study. The index comprises four five-point Likert scales. From among 22 items which Patchen tested as indicators of general job motivation, two questions (1 and 2) were selected as showing evidence of validity. Patchen combined these items to form what he calls Index A. From another study, two items (3 and 4) showed evidence of validity and were added to Index A (Questions 1 and 2) to form Index B, as shown in the questionnaire (Appendix I). The test-retest reliability for Index A only was calculated by Patchen to be 0.80 for individual scores, and 0.83 for small groups. He concludes that the indices of job motivation have a fairly good ability to distinguish among individuals or groups when there is considerable variation in index scores and/or on the criteria being predicted. It is suggested that of all the indices, Index B (all 4 items) is probably the best for use in distinguishing among individuals in the same work unit or same type of work unit. It is this index which is adopted in the current research in order to distinguish between supervisors in similar working environments who have varying levels of job motivation.

Task Rating Form/Role Perceptions Measure (Section 4)

The task rating form has been designed to assess both the supervisor's and his immediate superiors' perceptions of the supervisory work role. The respondents are required to evaluate the importance of 34 items reflecting 7 primary dimensions of the front-line supervisor's job as described in a study by Dowell and Wexley (1978) concerning development of a work behaviour taxonomy for first-line supervisors. The supervisor and his superior complete the task rating form independently and the degree of

agreement of accuracy of role perceptions (of the supervisor) is reflected in a discrepancy score.

Dowell and Wexley used factor-analytic methods to determine the major dimensions of supervisor work activity. On the basis of the resulting factor structure and an interpretation of the factors, the 7-factor solution was selected by Dowell and Wexley as "the most interpretable and parsimonious solution to the analysis". The 7-factors accounted for 48% of the total variance. The factors identified are as follows (definition for each factor were based on the specific work activities having factor loadings > 0.35 on the factors):-

1. Working with subordinates (items 1-7 inclusive)
2. Organising work of subordinates (items 8-12 inclusive)
3. Work planning and scheduling (items 13-15 inclusive)
4. Maintaining efficient/quality production (items 16-20 inclusive)
5. Maintaining safe/clean working areas (items 21-24 inclusive)
6. Maintaining equipment and machinery (items 25-29 inclusive)
7. Compiling records and reports (items 30-34 inclusive)

The original Dowell and Wexley instrument contained over 100 items concerning supervisory work activities. The current task rating form collapses the longer instrument, in the interest of parsimony and pragmatism, down to 34 items and incorporates those items from each of the 7 dimensions which possess the highest factor loadings on the factors.

Communication (Section 5)

This section attempts to measure the communicating relationship variable which concerns the communicating relationship between supervisor and his immediate superior, as seen by the supervisor. The measure examines several aspects of communication. They are:-

- (a) The discrepancy between actual and ideal ("should be") frequency of communication with boss (item 1 and 2)
- (b) The perceived quality of information received from superior measured by the respondent's (supervisor's) rating on a 5-point scale, of the information as timely, trustworthy, useful, and adequate.
- (c) The individual supervisor's rating of his relationship with his immediate superior (on a 5-point scale) with a response range between "not at all good" and "extremely good". All measures in this section are adapted from S. Vinnicombe's communication instrument (1978).

It is suggested that a low frequency of communication between boss and supervisor, a high discrepancy between actual and ideal ("should be") communication frequency, low ratings of timeliness, trustworthiness, usefulness, and adequacy of information, and a low rated quality of relationship between boss and supervisor, all contribute toward both a low accuracy of role perceptions of the supervisor and therefore likely to lead to a high degree of role ambiguity which may be experienced by the supervisor.

The split-half reliability for the communication scale was determined by Vinnicombe (1978) to be 0.70. The sample to which the scale was administered comprised 4 organisational groups (pilots, clerical staff, engineers, and duty officers), and involved 120 individuals. The same sample was employed to establish the reliability of the job satisfaction scale.

Job Satisfaction (Section 6)

The final section of the questionnaire derives from the Vinnicombe study (1978), and is designed to measure the role incumbent's overall job satisfaction on a 5-point scale. Respondents are required to indicate the extent to which 7 items reflect the individual supervisor's attitudes towards his job, responses ranging from "to a very little extent" to "a very great extent". Reliability for this scale was reported by Vinnicombe to be 0.85.

Summary

This chapter has described the methodology which has been employed in the study including the overall research strategy and design, and the constraints that have influenced the choice of research design. The sample design has been presented and the designation of "incidental sample" best describes the type of sample used in this research. Figure 8 illustrates the range of practical constraints which have influenced the study design employed in this study, and the advantages and drawbacks of field studies are discussed.

The achievement of organisational access has been discussed with reference to the practical elements which may influence the success of achieving access and some guidelines to researchers contemplating comparable procedures. Figure 10 summarises those factors found to contribute towards the successful achievement of organisational access.

Both the data collection methods of interviewing and questionnaires are examined with reference to the measurement of variables comprising the theoretical model and other, contextual variables. The type of interview selected is defined as semi-structured and the questionnaire scales are explained in terms of the composite variables derived from them. In addition, the technique of interviewing has been determined, isolating the different stages in the interview process.

CHAPTER FOUR

RESULTS OF THE PILOT STUDY

4.0 Introduction

The aims of this chapter are to present the results of the analysis of data collected from the three organisations participating in the pilot study. The objectives of the pilot study were to test the methods of data collection and examine the data to establish whether selected variables exhibit the relationships suggested in previous chapters. Further, patterns of attitudes are investigated to determine their conformity with the working hypotheses outlined earlier.

4.1 Preliminary Fieldwork Activities

The results of the initial fieldwork activities are discussed in the following sections. Both the process of conducting field research and the results are discussed. The modifications to the original methodology which has been adapted in the main field study are explained, indicating the directions which further research has taken.

Of the nine companies representing the total number of organisations participating in the research study, three comprised the pilot study sample population. In each case the practical constraint of availability of supervisors and managers has determined the final number of individuals participating in the study. The managements of the three pilot study organisations chose to introduce the research to individual supervisors and managers using one of two approaches. That is,

individuals' involvement in attending interviews and completing questionnaires was either completely voluntary, or potential subjects were informed by their managers that the company wished to assist in the research in every way and that they should attend for interview at a prescribed date and time. Company 1 and 2 chose the former approach, whilst company 3, the latter. The main effect of the type of approach chosen by each organisation appears to be the degree of suspicion individuals expressed during the earlier stages of the interview. Overall, the impression formed by the author is that those individuals who regarded their participation as voluntary appeared less suspicious than those who were merely informed that they should participate in the research. Table Five describes the location and product sector occupied by each company comprising the pilot study sample.

Both company 1 and 2 represented individual manufacturing units which were components of larger groups of companies, producing other food and non-food products. Company 3 is the only U.K. based manufacturing facility of an American-owned confectionary products manufacturer. The chief executive of each unit has profit responsibility and reports to a central administrative body on a regular basis. However, most matters of employee policy (excluding pay) are decided at a local level by the senior management group, all of whom (in each of the three cases) were located at the site of the manufacturing unit.

At each plant the structure of the operations function was similar to the others in overall design and the variations can be encompassed within the framework presented in Figure 13. The similarity between the pilot study organisations lies in the structure of the operations/production function. Variations exist between the overall organisational structure of participating organisations.

The interviews conducted during the pilot study involved a total of 61 supervisors and 16 managers, the distribution of subjects between organisations is shown in Table 7.

TABLE 5

PILOT STUDY ORGANISATIONS: LOCATION & PRODUCT SECTOR

	<u>PRODUCT SECTOR</u>	<u>LOCATION</u>
COMPANY 1 :	General Food Processing	N.W. England
COMPANY 2 :	Biscuits and Cakes	S. England
COMPANY 3 :	Chocolates and Sweets	S.W. England

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which describes, in addition, the overall response rate of individuals towards completion of questionnaires.

As described earlier, Company 1 and 2 devolved the decision concerning participation in the study to the level of participants, and in both organisations over 70% of the total number of supervisors on site during the period in which interviews were conducted attended interviews. In the case of Company 3, a response rate of 78% of all supervisors on site at the time of interviewing was achieved. Each organisation provided a "quiet room" (usually part of the training or personnel department) away from the shop floor manufacturing operation for the purpose of conducting interviews.

A profile of the supervisors is presented below in Table 6, describing the mean, standard deviations, maximum and minimum values of the biographical variables which were measured. The variables include age of supervisor, the number of years he has occupied a supervisory role, the number of subordinates who report to him directly, and the number of years he had worked in his position prior to his advancement to supervisor.

Company 1, situated in a large industrial complex in a city in North West England, suffered a recent history of low profitability. Managers in the organisation were aware of the atmosphere of apparent "gloom and doom" prevalent in the plant and were concerned to discover how the change in profitability had affected supervisors attitudes to their work.

Company 2 was sited in a much smaller, less industrially-developed town on the South coast of England. Well-known for its stability and good rates of pay, the plant had recently introduced a new product line which involved some change in the work activities of supervisors, as well as training in the new process and product specifications.

Company 3, in common with the two companies above, was undergoing their own type of change. In this case a four-day

TABLE 6 **SUPERVISORY PROFILE - PILOT STUDY** **(N = 58)**

<div> VARIABLE STATISTIC </div>	AGE OF SUPERVISOR	NUMBER OF YEARS AS SUPERVISOR	NUMBER OF SUBORDINATES	NUMBER OF YEARS IN PREVIOUS POSITION
MEAN	47.5	9.0	17.5	7.1
STANDARD DEVIATION	8.5	6.9	13.2	6.5
MINIMUM	31	1.0	2	1.0
MAXIMUM	64	27.0	67	32.0

Fig 13

ORGANISATIONAL STRUCTURE OF OPERATING
FUNCTIONS IN PILOT STUDY ORGANISATIONS

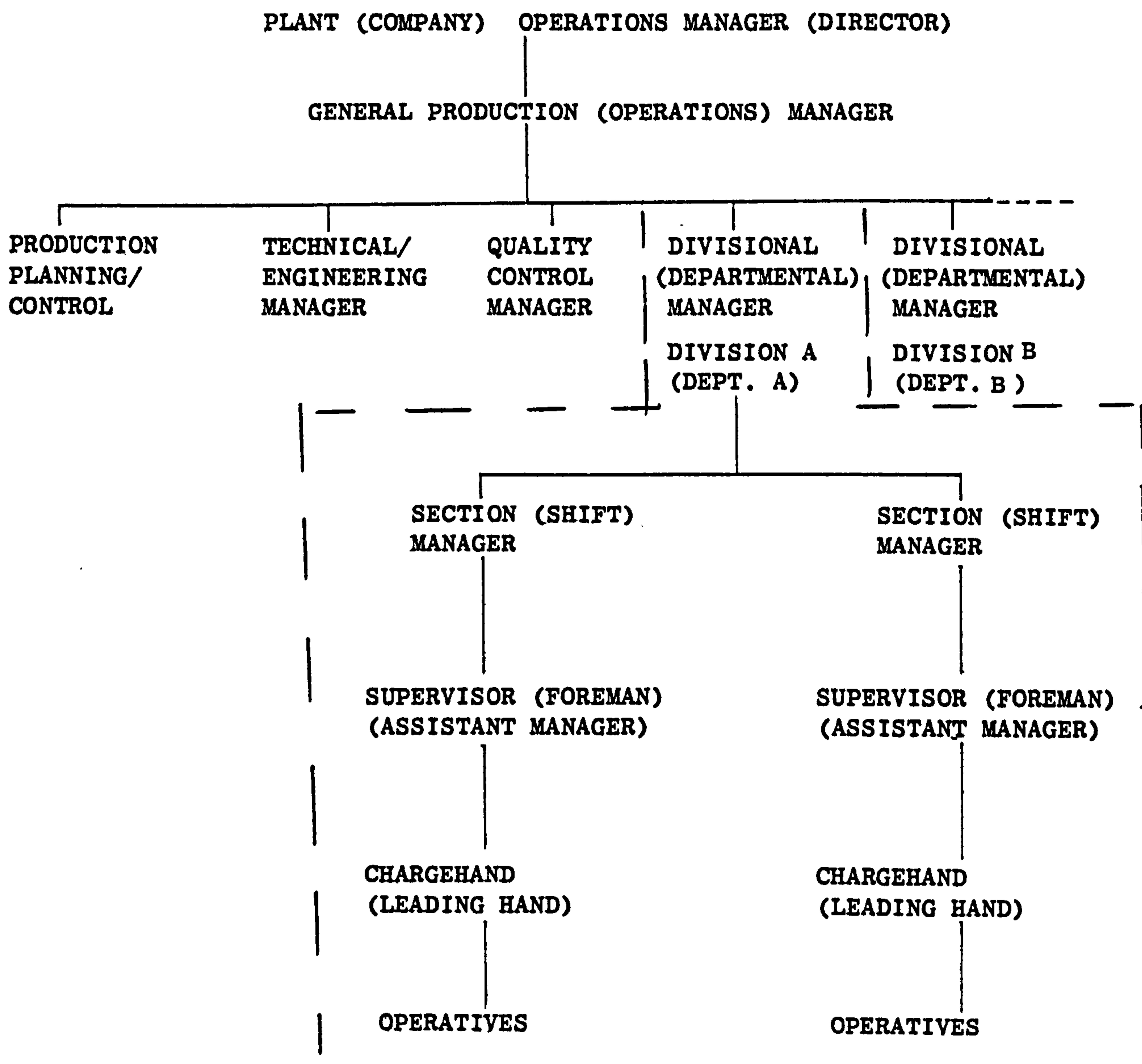


TABLE 7

ANALYSIS OF PILOT STUDY DATA COLLECTION

	(1) INTERVIEWS COMPLETED	(2) % OF TOTAL * GROUP ON SITE	(3) QUESTIONNAIRES RETURNED	(4) % RESPONSE (3) ÷ (1) × 100
COMPANY 1 SUPERVISORS	25	74%	23	92%
MANAGERS	6	85%	6	100%
COMPANY 2 SUPERVISORS	15	75%	14	93%
MANAGERS	4	80%	4	100%
COMPANY 3 SUPERVISORS	21	78%	21	100%
MANAGERS	6	85%	6	100%
TOTALS: SUPERVISORS MANAGERS	61 16		58 16	
MEAN % : SUPERVISORS MANAGERS		76% 84%		95% 100%

* Total group refers to the number of supervisors or managers on site working in the Production/Operations function

production week had been introduced, with non-manufacturing activities (cleaning, maintenance, painting) taking place on the fifth day. This provided, again, a change in the work activities of supervisors who were required to supervise a group activity not previously experienced by either subordinate group or supervisor.

The similarities across all these organisations, apart from the "change phase" which could be identified in each, and the organisation of the operations/production function, included the organisation's attitude towards supervisory performance. In each case senior management expressed not only a deep concern in the current level of supervisory performance, but were also interested to examine supervisory attitudes towards their work.

Whilst there were clear differences in, for example, the physical size of plant and type of production plant, this study has attempted to identify the common issues relevant to production supervisors and to discover the work attitudes which are most commonly shared between supervisors. The supervisory profile describes the statistics arising from analysis of the biographical data collected during the pilot study. The average age of supervisors in the pilot study was found to be 47.5 years, which lies between the average age of samples of supervisors researched in the NIIP survey (1951), (45), the Government Social Survey Report (1968), (46), and the average age of 156 supervisors studied by Child (1982), which was 50 years.

As all three of the pilot study plants (and all of the main study plants) were food manufacturing plants, the average of 9 years experience as a supervisor compares more closely with Child's result for the engineers plant (10 years) than the food plant (13 years). The average length of supervisory experience of the pilot study sample of supervisors is also somewhat less than that reported in the BIM study (1976) which was found to be 13 years.

4.2 Analysis of Questionnaire Data

The scales comprising the supervisory questionnaire and a description of their contents are described elsewhere (Appendix 1 and Section 3.3). A total of 58 completed supervisory questionnaires were received, the respondents completing their questionnaires sometime after the conclusion of their interviews, and sending them to the author at Cranfield.

The purpose of analysis of the pilot study questionnaires is now discussed. Firstly, the internal consistency of the scales used in the questionnaire was to be tested in an organisational context similar to that of the main study, and the outcome of the test was to determine whether any changes were required. Secondly, the validity of the questionnaire was also tested for face validity. The overall process was designed to indicate the value and relevance of the supervisory questionnaire as a useful data gathering instrument.

Whilst the exercise described above took first priority, the author also proposed to identify those results of data analysis which could be seen to support or refute the research hypotheses presented earlier. Another aim at this stage was to identify evidence which may have led to a modification of the theoretical model. The overall process was not one of rigorous hypothesis testing at this stage and the statistical analyses were performed to indicate whether proposed relationships between variables existed in the data. It is worthwhile to consider at this point some of the statistical groundrules which have subsequently been adopted in the analysis of main study data.

In making decisions concerning the outcomes of statistical data analysis, two types of error may be encountered. They are, Type I error - which is rejecting the Null Hypothesis (no difference) when it is true, and Type II error - which is accepting the Null Hypothesis when it is false. The level of probability at which the Null Hypothesis may be rejected and the original hypothesis accepted is commonly known as

the level of significance. Most often-quoted values for levels of significance in the behavioural sciences are .05 and .01, which indicate that there would be 5 or 1 chance in a hundred, respectively (depending upon which level was chosen), of making a Type I error. In studies such as this the researcher has some control over the choice of significance level, which is largely dependent upon the risk he or she wishes to take. The risk concerns the chance of being wrong in accepting, or rejecting, a tested hypothesis.

In this study the author has adopted the .05 level of significance, which represents the compromise between a too loose and too rigorous significance level. Siegel (1956, p.18) refers to guidelines for the choice of appropriate statistical tests:

"There are considerations other than power which enter into the choice of a statistical test. In this choice we must consider the manner in which the sample of scores was drawn, and the kind of measurement or scaling which was employed in the operational definitions of the variables involved... all these matters enter into determining which statistical test is most appropriate for analysing a particular set of research data".

Siegel concludes that the power of statistical analysis is a function of the statistical test used in the analysis, and he suggests that a test is good if it has a small probability of rejecting the Null Hypothesis when true, but a large probability of rejecting it when false.

A statistical test is only valid under certain conditions, those conditions being determined by the statistical model and the measurements. For example, in parametric tests the 't' and 'f' tests have a variety of assumptions underlying their use. When these assumptions have been met, they are most likely of all to reject the Null Hypothesis when false. However, in many research studies, these assumptions are not met. This position applies to most of the current data in that the

measurement is not as strong as interval scale measurement. Therefore, for the most part, non-parametric tests such as Spearman's rank correlation, are utilised in the analysis of data in this study. Some parametric techniques will be employed for illustrative purposes only.

The above reference to levels of measurement concerns the relationship between the different levels of measurement and the appropriate statistical tests relevant to that level. There are four levels of measurement - nominal, ordinal, interval, and ratio - different statistical tests being appropriate at each level. The "rule" expressed by Siegel requires that data which is measured by either nominal or ordinal scales should be analysed by non-parametric methods, data measured by interval or ratio scales may be analysed by parametric.

In this study data has been measured by either nominal or ordinal scales and therefore predominantly non-parametric tests will be applied to data analysis. The statistical tests used in the analysis of pilot and main study data are those which can be found in the Statistical Package for the Social Sciences (Nie et al, 1975) which has been useful in providing a unified and comprehensive package that is convenient, easily accessible, and appropriate for the analysis of questionnaire data.

The main aim of the author at the data analysis stage of the pilot study was to evaluate the supervisory questionnaire as a research instrument, and identify evidence which may support or refute the research hypotheses.

In order to assess the usefulness of the supervisory questionnaire several tests were performed to determine the reliability of the instrument. Prior to testing, however, the questionnaire was presented to experienced researchers at C.I.T. for comment and criticism. Whilst the scales have remained basically unchanged after this exercise, several words perhaps more relevant to an American culture

were substituted with their anglicised equivalents. The structure of the questionnaire (sequence of scales) was also slightly modified to improve ease of reading for respondents.

The supervisor's questionnaire was presented to a small group of production supervisors (12 - 4 from each pilot study organisation, these individuals not participating in the study) for their comments upon the face validity of the instrument and overall opinion of the questionnaire. The response was predominantly favourable in terms of content, however, some individuals (5) felt that the scales were not clearly explained, in terms of what was expected of the respondent in completing the questionnaire, at the beginning of each section. These explanatory notes were re-written to the satisfaction of the supervisors who reviewed the questionnaire. Another comment made by several individuals (4) was that reply-paid envelopes should be provided (addressed to the author) in order to reinforce the respondents' feelings of confidentiality towards the interview and questionnaire.

The next step in testing the supervisory questionnaire was to perform an analysis of scale reliability. Reliability is often viewed (Cronbach 1960, Nunnally 1967) by theorists and researchers in the field of the behavioural sciences as an important property of a measure and can be defined (Guilford 1954) as the

"Degree to which results of measurements are error-free, that is, are attributable to systematic sources of variance".

In other words, to the extent that scores yielded by some measure are error-free, to that extent the measure is reliable. The theorists Spearman and Holzinger (1924) reported that an observed score (X_o) has two components, a true score (X_T) and an error element (X_E). X_o is

merely the result of the measurement, but the true score, X_T , is the result that would occur given an error-free measure of an attribute. Whilst the true score (X_T) value cannot be known, it can be estimated by measuring an attribute a large number of times and calculating the mean of all the observed scores; the average of all such observed scores (\bar{X}_O) equals the true score (X_T). From statistical theory it can be shown that when true scores and error scores are statistically independent of each other, then the variance of the observed scores (σ_o^2) equals the sum of the variances of the true scores (σ_T^2) and error scores (σ_E^2). In equation form this becomes:

$$\sigma_o^2 = \sigma_T^2 + \sigma_E^2$$

The reliability of a measure can be expressed in the above terms by stating that reliability is the true score variance divided by the observed score variance. That is,

$$\text{reliability, } r_{xx} = \frac{\sigma_T^2}{\sigma_o^2}$$

As mentioned previously the values of true scores and the variance of these scores are never actually known. There are methods, however, for calculating total and error variances for a set of scores and the reliability of a measure can therefore be determined. In this study, such a method is the Internal Consistency Method. Nunally (1967), defines a test or questionnaire scale as internally consistent to the extent that there is a high degree of intercorrelation amongst the items that comprise the measure. The size of the reliability coefficient being based upon the average correlation among items (the internal consistency) and the number of items. The reliability coefficient is, therefore, one index of the effectiveness of an instrument and is a necessary condition for any type of validity. The reliability index

(Cronbach's coefficient alpha) has been calculated for the five scales in the supervisory questionnaire, and the results are presented below in Table 8.

The criterion which was selected to determine an acceptable level of alpha was that described by Nunnally (1967), who suggested that for a new instrument a value of alpha between 0.5 and 0.6 was acceptable. Clearly, Patchen's job motivation scale does not fulfil the criterion set for an acceptable level of scale reliability. The decision was, therefore, made to modify the scale to improve its internal consistency. The Need for Clarity scale reliability index (Lyons 1971) was only slightly higher than the minimum acceptable. Here again, the author chose to attempt to improve the reliability of this scale.

The small group of supervisors who (independently) provided valuable criticism concerning the validity of the supervisory questionnaire were interviewed and the subject of work motivation discussed in some detail. The author elicited statements from the supervisors concerning what they felt job motivation was in the context of their work. Questions such as "what would you look for in a supervisor, if you were trying to gauge how motivated he was?", generated ideas concerning the measurement of supervisors' job motivation. The main focus of the discussion was to determine what supervisors felt were accurate measures of an individual's desire to expend effort on a work task. The outcome of the interviews helped shape the design of the modified motivation scale (Section 3 - Supervisory Questionnaire - Appendix 1) which was extended to 16 items incorporating items from the Wherry and South scale (1977), (which were relevant to the desire to devote energy to work tasks) and items generated by supervisors themselves.

As Ghiselli (1964) has suggested, a useful strategy for improving the reliability of a scale is to increase its

TABLE 8 RESULTS OF RELIABILITY TEST FOR PILOT STUDY DATA (N=58)

<u>SCALE</u>	<u>RELIABILITY INDEX</u>	<u>-</u>	<u>COEFFICIENT ALPHA</u>
NEED FOR CLARITY		0.52	
JOB MOTIVATION		0.45	
ROLE AMBIGUITY		0.81	
QUALITY OF COMMUNICATING RELATIONSHIP		0.85	
JOB SATISFACTION		0.80	

length in an attempt to improve internal consistency, and hence reliability. The job motivation scale was therefore lengthened and changed from 4 to 16 items. The resulting scale was re-submitted to the group of supervisors mentioned earlier for review and after minor grammatical alterations, the group agreed its apparent validity.

A further sample of 15 supervisors was then selected, at random, from an alphabetical list being drawn up of all supervisors (a total of 60) and every fourth name was chosen. Unfortunately, whilst 15 were selected at random, 2 were replaced by substitutes due to sickness and holidays. The job motivation scale was mailed to the 15 supervisors with a covering letter explaining this was not part of the main survey, but a valuable element in validating part of the questionnaire. The responses were used to recalculate the reliability index which was found to be over 0.75.

The 'Need for Clarity' scale was also changed. The process known as scale purification was performed by removing item 4 from the scale which had a very low correlation with all other items in the scale. The reliability index resulting from removal of this item was 0.85.

The secondary objective of the pilot study was to identify data which may support the research hypotheses. The first test applied to the data was the Kruskal-Wallis one-way analysis of variance test (Siegel 1956, pp 184-193). The test was employed to decide whether the three groups of supervisors (1 from each organisation) were from different populations.

This technique tested the Null Hypothesis that the 3 samples came from the same population. The requirement of the test is that at least ordinal measurement of the variables has been used. The results of the test for the variables job motivation, quality of communicating relationship between supervisor and his boss, age of supervisor, number of years as supervisor, accuracy of role perceptions of supervisor, number of subordinates, need for clarity, job satisfaction, role ambiguity, and the supervisor's rating of his relationship with his boss are shown in Appendix 3.0 to 3.9. The level of significance chosen is the .05 level. So for each variable the level of significance has been set at

$\alpha = .05$ which means that the region of rejection for the Null Hypothesis comprises all those value of H (which is calculated by the Kruskal-Wallis test) which are so large that the probability connected with their occurrence under H_0 is equal or less than $\alpha = .05$. The results indicate that only the accuracy of role perceptions (DROLPER), and job motivation variables have levels of significance sufficiently low to reject the Null Hypothesis. This result indicates the level of difference across the three samples, which in the main part suggests that there is considerable similarity between the three groups of supervisors.

The second test applied to the questionnaire data was the Mann-Whitney U-Test (Siegel 1956) which was designed to test whether it was likely that two independent groups were from populations with the same median. This test was performed to determine whether the pilot study sample of supervisors did exhibit a higher level of ambiguity than another group (e.g. managers). Scores on the ambiguity scale for a group of managers taken from the three companies (10 from each company including 2nd line (12) and middle managers (18)) were compared with the scores of the supervisors in the pilot study sample. The Null Hypothesis (H_0) was that

the two groups were from populations with the same median and that the scores of supervisors and managers on the ambiguity scale are the same. The alternative hypothesis was that supervisors score significantly higher (at the .05 level) than the sample of managers. As in this case, if the values of n_1 and n_2 (n_1 = sample of managers (30), n_2 = sample of supervisors (58)) are larger than 20, then the sampling distribution of U approaches the normal distribution and the value of Z can be computed. The value of Z computed ($Z = 2.67$, $p = .004$) showed that H_0 has a p of less than .05 and therefore the decision was to reject H_0 in favour of H_1 and the conclusion follows that supervisors' ambiguity score is higher than that of managers in the sample.

The result of the test suggests some support for the statement that the level of role ambiguity experienced by supervisors in the pilot study sample is greater than that of the managers in the management sample. This data lends support to the hypothesis that supervisor's are more likely to experience higher levels of role ambiguity in their roles than other organisational groups.

Another analytical technique applied to the pilot study data was Spearman's rank correlations. The results of this analysis including correlation coefficients (r_s) between the variables measured, and their level of significance, are presented in Table 9. These statistics have been calculated by use of a computer program (Nie et al, 1975) as have the levels of significance which are derived from the associated value of ' t '. The correlation coefficients of two relationships show significance at the .001 level. They are the relationships between job satisfaction and role ambiguity, and the quality of communicating relationship between the supervisor and his immediate superior (as rated by the supervisor) and the relationship between supervisor and his boss (also rated by the supervisor).

TABLE 9 SPEARMAN RANK CORRELATION COEFFICIENTS (N = 58)
FOR PILOT STUDY DATA

VARIABLE	1	2	3	4	5	6
1. Need for Clarity	1.00					
2. Role Ambiguity	0.17	1.00				
3. Relnboss	- 0.36*	- 0.17	1.00			
4. Qualcom	- 0.22*	- 0.23*	0.55***	1.00		
5. Job Satisfaction	0.07	- 0.49***	- 0.17	0.07	1.00	
6. Job Motivation	- 0.12	- 0.24*	- 0.001	0.02	0.18	1.00

* = Significant at .05
 ** = Significant at .01
 *** = Significant at .001

(Relnboss - Rating of relationship between supervisor & superior (by supervisor))
 (Qualcom - Quality of communicating relationship between supervisor & superior)

Other significant relationships are those between Need for Clarity and the relationship between supervisor and superior (called relnboss from now on as shorthand), between relnboss and the quality of communicating relationship between supervisor and superior (called qualcom as a shorthand form), between qualcom and role ambiguity, and between role ambiguity and job motivation. Whilst these latter relationships have only modest correlations, the following relationships conform to the direction hypothesised previously. They are:

1. Role Ambiguity and Job Motivation - negative and significant at .05 level.
2. Role Ambiguity and Job Satisfaction - negative and significant at .001 level.
3. Qualcom and Role Ambiguity - negative and significant at .05 level.

The largest and one of the most significant positive relationships is that between Relnboss and Qualcom. This suggests that those supervisors who rate their overall relationship with their superiors highly, also rate the quality of their communicating relationships highly. Low ratings of Relboss being associated with low ratings of Qualcom.

4.3 Results of Questionnaire Data Analysis

Information concerning the supervisors' attitudes and experiences was recorded during interviews by means of notes taken by the author. In a minority of

cases (7) it became apparent that the subjects were anxious and distracted by the process of note-taking and consequently, on conclusion of those interviews, a summary of the interview was written.

In each case the participant organisation discouraged the use of a tape recorder to record interviews as the method was viewed as undesirable from the point of view of confidentiality and as an inhibitor to open discussion of work-related issues.

The data resulting from all interviews with supervisors and managers was collated by the author and a content analysis performed. The main subject areas (defined in Chapter 3) were discussed and those raised by individual interviewees were classified by common subject area and analysed in terms of the respondents' favourable, neutral or unfavourable attitudes towards subjects. The results of the content analysis, the mechanics of which have been presented in the discussion of methodology in the previous chapter, are presented in the following pages.

4.3.1 Major Changes in the Supervisory Role

Supervisors were asked at the outset of the phase, during which pre-planned subjects were discussed, what they saw as the most significant changes (significant to them) that had taken place over the period of their experience as supervisors and what their attitudes were towards these changes.

A large majority of the pilot study sample of supervisors (49 out of 61) referred only to their experiences with the organisation that currently employed them (only 24 of the total sample have had "other" company experience), whilst the remainder mentioned, in addition, their

experiences with other companies which had employed them. The comments presented below, therefore, mainly refer to the subjects' work experience with their current employer.

The responses to the question, "what do you feel are the major changes that have occurred in your job and the company since you became a supervisor", have been categorised into two broad classifications. They were:

1. References to changes in management personnel and their effects.
2. References to changes in other aspects of the supervisory work system.

A sample of representative remarks from each category, and commentary thereupon, is presented in the following pages.

Category 1: References to Changes in Management

The style and behaviour of managers and management generally is often mentioned, a typical comment is:

"Management here is more efficient now, but this has caused more 'aggro' from the floor (shop floor). They're (management) much more worried about costs now - some people on the floor moan about the strictness these days" (C1 A4)

Here, the individual has referred to the improved 'efficiency' of management over his work experience and the effects upon attitudes of the workers on the shop floor. Concerning the movement of managers in terms of job mobility, the following comments are pertinent:

"There are often changes in managers - about every 2 or 3 years - which is bad for us (supervisors) and the shop floor". (C2 B1)

"The new managers have changed a lot over the last 5 years since I've been here - we used to care more about our people". (C3 B1)

The latter comment represents a theme often mentioned which is the shift in management focus, from the superior's viewpoint, from managing people on the shop floor to managing costs incurred in the production process generally which naturally includes labour costs. Effects upon supervisory status are commonly attributed to changes in management and the effects of managerial decisions. For example, the remark below encapsulates the view that managers are largely responsible for the lack of respect the supervisor now feels.

"We don't get the respect like before from managers and this effects the shop floor - it rubs off on them". (C3 A2)

Reference concerning changes in the physical working environment were common, those referring to managers' influence are represented by the comments below:

"Housekeeping's now very poor - we only get things done when there's a visit - some V.I.P. - I think it's down to the management that's changed since I've been here". (C1 A3)

Other physical changes which have occurred as a result of managerial decisions commonly refer to the production facilities (new plant, products, and methods of working) and new methods of working.

"There have been technical changes, new machines and methods have increased productivity - it's about twice what it was - but management's the biggest difference - they're more professional today". (C2 B4)

"We have grown a lot - more products, more machines, and more admin. - but management is not so friendly as they were - they spend less time on the shop floor now". (C₁ B₂)

The belief that managers spend less time on the shop floor than previously is apparently widespread and is viewed as unfavourable by a large majority of individuals who refer to the subject as a significant change. The comment below describes an example of this.

"We used to see managers more often on the floor which showed they were interested - it helped us (supervisors) but now they always seem to be at meetings - I never see him in the morning these days - he's at a meeting and God knows what he does at them". (C₃ B₂)

Overall, the responses made by supervisors concerning the issue of changes that have affected the supervisors reflect the overwhelming negative attitude towards changes involving or caused (as seen by supervisors) by managers.

A clear majority (over 75%) of all supervisors described changes in their work situation with reference to management changes (either personal changes or changes attributed to managerial decisions) in negative (unfavourable) terms. Many supervisors described the major changes that have occurred in their work experience in terms of the effect of "managerial style" and the "quality of management". Some typical comments referring to these issues were:

"Managers are much younger now - my manager is much younger than me - they seem to be all theory and no practical experience; but they move around a lot which is no good for the department". (C₃ B₃)

"Top management has changed and this has effected everything. They are more careful now with costs and that - but you can't get sacked now unless you shoot the M.D.. The Unions know it and that production won't stop - so they have management over a barrel - our hands are tied now". (C₃ A₈)

The latter comment concerns the feelings of lack of power of supervisors in dealing with the Unions and the shop floor work group. This change has been attributed to the changes in senior management personnel, who are seen by supervisors as more concerned with maintaining production levels than the discipline of employees.

One strongly held attitude concerned changes in the power of Trade Unions and the management response to this change. An example of such an attitude was:

"The workforce has changed a lot since I came. They don't give a now. Union power has got much more and management got weaker - they (management) won't support you like they used to - even over disciplining workers". (C₁ C₃)

Further references to managers and management were made when discussing changes in supervisory authority, safety and hygiene.

"I feel like a bit of a messenger sometimes - I've tried to improve things on the floor - housekeeping, hygiene - but my manager won't back me up - I think he's scared of the Union". (C₂ B₁)

The lack of "support" from managers and reduction in supervisory authority was often mentioned during discussions concerning changes in the power of Trade Unions. There was, however, a minority view amongst supervisors which were viewed as favourable changes in management.

"Safety and hygiene have both got a lot better - senior management has helped us a lot to get there - with their support". (C₃ B₁)

In summarising the most common attitudes of supervisors towards changes in the supervisory work system which have been influenced by, or attributed to, management (personnel changes or managerial decisions and behaviour), the following four factors appeared most frequently in discussions with supervisors.

- A. The influence of management and changes in the management team was clearly visible and has had an important influence upon the supervisor's perceptions of his work. Overall, the main changes which have been influenced by management are referred to as:
 - (i) Changes in production facilities, factory layout, types and range of products, plant processes.
 - (ii) Changes in the physical component of supervisory work. Work is apparently less physically arduous today according to many supervisors.
 - (iii) Changes in the style of supervision adopted by supervisors.
 - (iv) Changes in the recruitment, selection and development of supervisors.
- B. Supervisors seem to recognise the power of management to implement change and affect attitudes (of shop floor operatives, for example,) by their management style.

- C. There is an implicit acceptance amongst supervisors that managers can greatly aid or inhibit the supervisor in achieving what he (the supervisor) regards as his work targets. The majority of responses in this section indicate that supervisors feel that managers have largely negative effects upon the achievement of supervisory work targets.
- D. Supervisors commonly refer to their belief that managers are less visible on the shop floor today than previously. In discussions with managers (supervisors' immediate superiors) many felt that this was a result of an attempt by management to allow "supervisors to manage" but supervisors, however, saw this move as an indication of lack of interest in shop floor activities.

Category 2; concerns the changes which supervisors describe with reference to aspects of the supervisory work system which do not concern managers or management decisions.

Category 2: References to Changes in Other Aspects of the Supervisory Work System.

With reference to safety in the workplace, supervisors comments concerning this issue were predominantly positive. One comment describes the favourable response to this issue:

"Safety is very much better now, my attitudes to safety have changed a lot - we have to take much more care now - in the production departments and on the plant generally. We should have done this before and not waited 'till we had to when the law came in". (C₁ B₁)

Additional comments concerning legislation focussed upon health and safety at work and employment protection. Some remarks referring to these issues were:

"The main thing is the law. All these new rules about health and safety - and employment law puts a lot more responsibility on us". (C₂ B₁)

The changes in legislation effecting the supervisor were often discussed in terms of changes in supervisory behaviour, particularly in respect of managing the shop floor work group. One supervisor commented:

"I need to be a bit tactful and cunning today with the men - especially with the new laws and the Union - this is the big change for me - it's not like when we could send them down the road - which I don't agree with anyway". (C₁ B₃)

This comment reflects the recurring appearance in answers of the change in supervisory behaviour in response to changes in legislation. Whereas in previous years many supervisors believed they had the authority to "hire and fire", the common attitude today is that although the authority to recruit and dismiss employees has been removed, supervisors perceive an increase in their responsibility with reference to health and safety in the workplace. They further recognise that legislation concerning employment protection has influenced their behaviour concerning disciplining and general management of the shop floor work group.

A considerable amount of time during this stage of interviews with supervisors was devoted to a discussion of the changes in the supervisor's work tasks. Whilst the physical aspects of work (as noted earlier) appear to be less arduous today, the level of complexity and responsibility of supervisory tasks seem to have increased.

Several comments reflect this point:

"It's more of a challenge today - there's more to it - more machines - newer, more products, but it's less physical now. But we do much more figurework now - you need to be more of a diplomat too". (C₂ A₁)

"My job is easier in that I don't do much physical work like before - I'm not so tired at the end of the day - but it's more work in another way - handling the men is trickier now - there are no big sticks any more". (C₁ A₂)

The change in supervisory work tasks may be seen as a change in a balance between a supervisory role comprising high authority and a high physical element in work tasks, and lower authority and less physically arduous work tasks. Whilst the balance appears to have been tilted towards the less physically arduous work tasks, the degree of complexity and level of responsibility reported by supervisors seem to have increased over the period of many supervisors' work experience. A common concern of supervisors was the change in discipline amongst the workforce and workforce attitudes generally. Some typical remarks are presented below.

"There is a general lack of interest in the job today - even with all these redundancies outside - people on the floor don't care - this spreads through to supervisors too". (C₁ C₁)

"Discipline is not what it was - it's gone right down. I can remember when workers were proud of their jobs - they don't give a damn now and nobody cares - so why should I?" (C₁ A₂)

The comments made by supervisors represented in the previous text reflects the responses of supervisors during discussions of the major changes which had occurred during

TABLE 10 MAJOR CHANGES IN SUPERVISORY WORK SYSTEM
AND ASSOCIATED ATTITUDES

<u>Major Changes</u>	<u>Attitude</u> ¹	<u>Frequency</u> ²	<u>Rank</u>
Managers, Management	44-/4N/9+	57	1
Factory/ Production Facilities	9-/2N/41+	52	2
Legislation	9-/4N/21+	34	3
Type of Work (Complexity, physical element)	6-/3N/15+	24	4
Supervisory Style	5-/15+	20	5
Selection Recruitment	10-/1N/5+	16	6
Supervisory Status	12-/3+	15	7
Job Interest	9-/1N/2+	12	8
Training	7-/3N/1+	11	9
Trade Unions	6-/1+	7	10
Discipline	4-/1N	5	11

KEY

¹ - (unfavourable)
+ (favourable)
N (Neutral)

² (frequency of mention)

the supervisors' work experience. The frequency and attitude associated with the various changes described by supervisors are presented in Table 10.

Most frequently mentioned by supervisors were the issues concerning managers and management (and the effects of management decisions) and the physical working environment. The attitudes associated with the former issue were predominantly unfavourable, those associated with the latter, favourable. This result would seem to support the findings of Salancik and Pfeffer (1975), concerning the importance of the supervisor's boss in influencing the supervisors' attitudes. Legislation is the third most popular change in terms of the frequency with which it is mentioned by supervisors. It is seen in clearly positive terms by supervisors who see the changes resulting from legislation as favourable. Specifically, supervisors see the improvements which have been made in terms of health and safety in the working environment as clearly beneficial and favourable from their viewpoint. The negative attitudes towards the subject of legislation are mainly associated with the difficulty linked with disciplinary measures and dismissal of employees.

4.3.2 Orientation/Group Membership

This subject area concerns the attitudes of supervisors with respect to membership of a specific group. Supervisors have often been viewed as occupying a position as "man in the middle", in some kind of organisational "limbo" placed between the shop floor and management. Supervisors were asked whether they saw themselves as a member of a group (for example, the management team, the supervisory group, or shop floor work group) or simply as an individual company employee. Several representative comments concerning the supervisor's work with respect to his orientation towards different work groups are described below.

"I'd like to believe I was part of management, but I know I'm not. We're right in the middle between managers and workers". (C₁ A₁)

"We're called first line managers by management, but most of the time I'm in the middle". (C₃ B₄)

"I feel closer to the shop floor - I spend most of my time with them - and I used to work with some of them", (C₁ B₄)

A clear majority of supervisors saw themselves as most often associated with the shop floor work group, less often as the middle man or buffer between management and workforce, and least commonly reported was the feeling of membership of the management team. There are two reasons for discussing this issue. The first concerns the belief that supervisors are "men in the middle" (Roethlisberger, 1945) and are buffers between the two groups of management and workforce. Secondly, on a more practical note, following discussions with managers in each company it became apparent that many managers made an explicit attempt to encourage their supervisors to feel part of the management team. Initial results indicated that this was not effectively achieved (from the perspective of supervisors) and the feedback of the pilot study results initiated, in some cases, a review of the relationships between managers and supervisors.

Many of the more experienced supervisors believed that they had previously felt closer to the management team as they saw themselves as performing managerial tasks in the past as part of their supervisory role. In their current roles, however, the more experienced supervisors considered that the growth in the number of levels (and individuals) in the management hierarchy and the introduction of specialist departments (quality control, production planning and control, personnel and industrial relations

departments) had contributed significantly to the removal of many of the supervisors tasks which they described as "managerial" in nature.

In addition to the above question, the responses to which are presented in Table 11, supervisors were asked the following two questions concerning their orientation and group membership.

- (i) "Of which group would you say you were a member?"
- (ii) "Do you feel any allegiance to any one group, if so, which one?"

The responses to both the above questions are described in Table 12 below. They both replicate the pattern of responses resulting from the first question concerning orientation (see Table 11) and support the suggestion that supervisors see themselves closely associated to the shop floor work group.

4.3.3 Recruitment/Selection/Training and Development Of Supervisors

This group of issues has been combined to form one category as in many supervisory interviews the four subjects were seen by supervisors as closely associated. Supervisors often referred to elements of each subject when discussing one of the above. For example, in discussions of the selection of potential supervisors, supervisors referred to their own criteria for identifying an effective supervisor and the training a successful candidate may receive. Similarly, when discussing training for supervisors, interviewees commonly mentioned the opportunities for career development within the company, and their perceptions of the criteria management would employ to assess the effectiveness of a supervisor.

TABLE 11 ANSWERS TO THE QUESTION "TO WHICH WORK GROUP
DO YOU FEEL MORE CLOSELY ASSOCIATED?" (N = 61)

<u>RESPONSE</u>	<u>FREQUENCY OF RESPONSE *</u>
1. To the shop floor work group/the workforce	76%
2. To the supervisory group/ middle group between workers and management	13%
3. To the management team/group	9%
4. No group/don't know	2%
(* all percentages rounded to nearest 1.0%)	

TABLE 12 ANSWERS TO QUESTIONS "OF WHICH WORK GROUP
WOULD YOU SAY YOU WERE A MEMBER? (DO YOU FEEL
ANY ALLEGIANCE TO ANY ONE WORK GROUP, IF SO
WHICH ONE?"

<u>RESPONSE</u>	<u>FREQUENCY OF RESPONSES(%)</u>	
1. Shop floor work group	69%	(73%)
2. Supervisor's work group	15%	(18%)
3. No group/don't know	10%	(5%)
4. Member of management team	6%	(4%)
(* Brackets indicate answers to question in brackets above)		

The selection and recruitment of supervisors was a subject about which many supervisors expressed strong attitudes. Some supervisors' remarks which reflect their attitude are presented below:

"Most of the supervisors here come up from the floor - they're usually chargehands and when a job comes up they can apply - it's not much change - just a coat and hat". (C3 B8)

This comment encapsulates a common attitude towards selection of supervisors. The progression from chargehand to supervisor is seen by supervisors as a natural career development. The opportunity for career development is perceived as occurring whenever a supervisory post becomes vacant. There is also an implicit belief that potential supervisors always require shop floor experience. The following remark is one example of this.

"You need to have a practical experience on the shop floor - you can't teach that - we had training but it's for the classroom - not much use at all". (C3 B5)

The types of qualifications required by a potential supervisor are commonly seen by supervisors as those which seem equally appropriate to shop floor operatives. These are not the ideal qualifications, skills or abilities which supervisors would use to assess the potential suitability of a candidate, but those which supervisors believe are most important in determining the career development from chargehand (or leading hand) to supervisor. Two remarks illustrate this attitude.

"You need to be a good worker to get to supervisor here - turn up smart, on time, work hard - and keep your nose clean and you'll get on - most workers don't want the job anyway". (C3 B4)

A similar remark was:

"You should be picked on things like managing men, dealing with problems on the floor, and good organising but it's not like that. Anyone could be a supervisor - you just work like a slave". (C₁ B₈)

These two comments refer to the capacity for "hard work" as a pre-requisite for selection of a supervisor. This is not a criterion set by supervisors as part of their 'ideal' set of requirements for an effective supervisor, but rather one that managers view as important for the selection of supervisors. A summary of responses to the two main questions concerning the subject discussed in this section of the interview are shown in Tables 13 and 14A.

In the three companies comprising the pilot study, supervisory training was described by most supervisors as either non-existent, very irregular, or inappropriate. Only a small minority of the sample of supervisors (12 individuals) believed that training was useful and held a favourable attitude towards supervisory training. Development and promotion were discussed in mainly negative terms by supervisors, supervisors often referring to limited career development opportunities. However, older more experienced supervisors were less negative in their comments than younger supervisors who saw limited career opportunities as a source of dissatisfaction.

The most popular item which supervisors saw as necessary for success in the role of supervisor was experience of working with men on the shop floor, over half of the pilot study sample of supervisors referred to this aspect of an individual's "personal portfolio" as an important element. A noteworthy comment on these results is that no supervisor identified "hard worker", "good timekeeping", or "smart appearance as important characteristics of a successful

TABLE 13 ANSWERS TO THE QUESTION "IF YOU WERE
SELECTING A SUPERVISOR WHAT SORT OF BACKGROUND
EXPERIENCE WOULD HE HAVE?"

<u>RESPONSE</u>	<u>FREQUENCY OF RESPONSE</u>
1. Experience of shop floor work.	86%
2. Experience as a chargehand on shop floor.	34%
3. Technical background, knowledge of products and machines.	14%
4. Experience of managing men.	12%

TABLE 14A ANSWERS TO THE QUESTION "WHAT ARE THE MOST
IMPORTANT SKILLS AND ABILITIES A PERSON SHOULD
HAVE IF HE IS TO BECOME A SUCCESSFUL SUPERVISOR"?

<u>RESPONSE</u>	<u>RESPONSE FREQUENCY</u>
1. Good experience of working with men on shop floor.	54%
2. Detailed knowledge of plant, products and processes.	36%
3. Good communicator.	19%
4. Good man-manager.	16%
5. Ability to solve problems - e.g. breakdowns, disputes - quickly and effectively.	12%

supervisor. These issues being those which supervisors saw as elements in the assessment of potential supervisors by managers.

4.3.4 Communicating Relationship with Immediate Superior

Conversation involving the above subject was mainly concerned with eliciting the supervisors' perceptions of the type and quality of communicating relationship between themselves and their immediate bosses. The discussion often included the supervisors' description of how and when they communicated with their immediate superior. One typical comment focussed on the frequency and content of communication.

"We used to have regular meetings with our manager - once a week - to discuss all sorts of things - plant problems, new lines - that's gone by the board now. I don't see him much - and then only for a few minutes... It was better before..."

(C₁ C₂)

There was a predominantly unfavourable attitude expressed towards many communication events with managers. Commonly, supervisors saw their managers to talk to about once a day, and that meeting usually involved an exchange of information concerning the current and following day's production (target volumes, quality, and labour issues). The negative attitudes were mainly associated with receiving "negative feedback" (what went wrong) from previous production operations. Whilst unfavourable attitudes emerged as common, communication practises varied across departments.

"We have a monthly meeting sometimes - if there's new plant or changes in production - we (supervisors) don't get together to talk out our problems with him (the manager) - it's usually one-way - he says what's going on or what's wrong and that's all". (C₂ B₄)

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"We meet every day in the morning for a quick meeting with the manager. He says what's happened yesterday and tells us what to do today. We sometimes have a meeting Saturdays (in the pub) when we're off shift - but that's no good is it?" (C1 B5)

"I see the manager very often when there's something up (wrong) or if there's a big problem - but if we've had a good run and all's well - he says nothing! He says his door is always open but he's never in". (C3 A7)

Table 14B contains the major responses to the question of the supervisor's description of the way in which he communicates with his immediate superior. Over 77% of all supervisors' responses described their communication with their superiors as worse than "quite good".

In all three organisations it was apparent that there were few regular group communication events between supervisors and managers. Where such systems had existed previously, many supervisors referred to them in favourable terms with respect to their value as useful meetings. It should be remembered however that departmental or group meetings in these organisational contexts is traditionally difficult to achieve on a regular basis due to off-shift supervisors not being present on site. Information received by supervisors from their superiors on a regular basis was found to be mainly data concerning production volumes, (past and future), labour levels, and quality reports. With reference to the supervisors' responses to the question concerning the adequacy, usefulness, timeliness and trustworthiness of information from their superior, Table 15 encompasses the most popular answers.

The above responses support the impression of the author that the communication event is perceived in clearly

TABLE 14B

ANSWERS TO QUESTION "HOW WOULD YOU
DESCRIBE THE WAY YOU AND YOUR BOSS
COMMUNICATE?"

<u>RESPONSE</u>	<u>RESPONSE FREQUENCY</u>
1. Quite well but could be improved.	12%
2. Well, good communication.	8%
3. Badly, poorly, not good, waste of time.	43%
4. Very poor, less than useless, very bad.	27%
5. Not at all.	7%

TABLE 15

ANSWERS TO QUESTION "DO YOU FEEL
INFORMATION YOU RECEIVE FROM YOUR BOSS
IS TIMELY, TRUSTWORTHY, USEFUL, ADEQUATE?"

<u>RESPONSE</u>	<u>RESPONSE FREQUENCY</u>
1. Useful (Yes/No)	19% (Yes) 68% (No)
2. Adequate (Yes/No)	34% (Yes) 64% (No)
3. Timely (Yes/No)	25% (Yes) 69% (No)
4. Trustworthy(Yes/No)	16% (Yes) 74% (No)

unfavourable terms by supervisors, at least across the four dimensions described above. Extremely strong views expressed by some supervisors (unfavourable attitudes) were closely associated with a generally poor overall rating (by supervisor) of his relationship with his boss.

4.3.5 Sources of Job Satisfaction/Dissatisfaction

The main structured questions designed to stimulate not only relevant responses but also a general discussion of the subjects were:

"What do you feel are the major sources of job satisfaction in your job?"

and later in the discussion,

"What do you feel are the major sources of job dissatisfaction in your job?"

These two subjects were discussed at greater length than most other categories of subject due to the importance of the subjects as central work attitudes and the need for clarification of the issue to be covered. Initial discussion centred around sources of job satisfaction for each supervisor. The concept of job satisfaction was introduced in terms of aspects of supervisory work from which individuals derived pleasure, enjoyed performing, or on completion of the task, experienced job satisfaction. Some supervisors described work days, which, on their conclusion, had caused feelings of satisfaction. For example, one supervisor related the achievement of production targets to job satisfaction:

"Getting production targets and going on well with my manager and crew are the things that I get satisfaction from". (C1 B10)

Another, referred to the knowledge of successful task performance as an important element in determining feelings of satisfaction at work:

"It's mostly about feeling satisfied when you know you've done you work well - the men know too - I always tell them well done - I can't say the same for my governor though. I'm satisfied with work, the money's O.K. and I get on with the lads". (C₃ A₉)

This remark identifies the lack of positive feedback reported by many supervisors. That is, few supervisors report situations where they have received communication concerning work tasks successfully completed. Another comment reinforces this situation:

"You feel satisfied if the boss comes and tells you we've done a good job - that's once in a blue moon!" (C₃ B₄)

Supervisors describe their work relationships both with superior and subordinates as sources of job satisfaction for many of them.

"A good relationship with my boss and my crew is important to me - I get satisfaction from just coming to work then - it helps too when things are running smoothly - no breakdowns, good quality, and no absentees." (C₃ B₁)

The three main sources of satisfaction most frequently mentioned by supervisors during interviews were as follows:

1. Successful completion of the Section/Departmental production task.
2. Close, "good" relationships with subordinates and superior.

3. Conditions of work. Immediate work environment, salary, shiftwork, holidays and "time off".

As shown in Table 16, over 80% of supervisors described both point 1 and 2 as the main source of their job satisfaction. Whilst there were many differences in how individuals defined "successful completion" of production tasks, the central theme remained quite constant. The central theme was that many supervisor's job satisfaction was closely allied to the achievement of a group production task. The responses to questions concerning job satisfaction (mainly questions of clarification) are supported by comments made by supervisors concerning their overall work performance and departmental performance. The most commonly shared attitude relevant to this issue was that supervisors saw their own performance as equivalent to the departmental production performance. That is to say, supervisors in the pilot study often define their work performance (upon which they are evaluated by their superiors) as closely related (if not identical) to the quality of output, production volumes, manufacturing costs, and utilisation of plant and labour achieved by the manufacturing section or department in which they work. Supervisors felt their performance was reflected in the results achieved by the department, many however were unsure about the method employed by management to assess the quality of performance of supervisors..

This is one example of the lack of clarity surrounding aspects of the supervisor's role, and is an apparently important element to supervisors (i.e. the method of evaluating performance).

Sources of dissatisfaction described by supervisors in the sample fell within two broad categories. Firstly, those sources which can be classified as opposites to the issues presented above as sources of satisfaction and secondly,

TABLE 16

ANSWERS TO THE QUESTION "WHAT DO YOU
FEEL ARE THE MAJOR SOURCES OF JOB
SATISFACTION FOR YOU IN YOUR JOB?"

<u>RESPONSE</u>	<u>FREQUENCY OF RESPONSE (%)</u>
1. Successful completion of the section/departmental production tasks.	87%
2. Close/"Good" working relationships with subordinates and superior.	83%
3. Conditions of work - salary, immediate environment.	46%
4. Smooth-running shift, no problems/disputes/breakdowns.	12%

those sources expressed by supervisors which concern other aspects of the supervisory work system. In the first category, for example, of the 87% of supervisors who described a major source of satisfaction as successful completion of the departmental production task, 41% felt that those factors which inhibited the achievement of the production task were main source of dissatisfaction at work. Some comments made by supervisors illustrate sources of dissatisfaction:

"Manning levels is one problem, then the breakdowns - not surprising when you see how much maintenance is done. When the quality is bad we have a lot more work - these are dissatisfactions for me". (C₂ A₉)

Again, in the remarks below, breakdowns are seen as inhibiting the achievement of production targets.

"You know what it's like on a breakdown or a new machine's not right - chaos - with a 24 hour process it's panic when we're down... the men get upset, and me - especially when Mr.... (the manager) comes down and has a go". (C₃ B₄)

"If you could see us when there's a breakdown you'd know why I get so mad". (C₁ A₄)

Absenteeism and quality specifications are viewed by supervisors as additional factors which help prevent the achievement of production targets as reflected in the following comments:

"I'm in a spot when the men don't turn in - either I get some from another section or I fill in on the line myself - if I do that I'm told by the manager I'm not here to work on the line but supervise. He won't take on more cover so what do I do? - That's the main dissatisfaction for my job." (C₃ A₇)

Reference to quality problems by supervisors are represented in the remark below.

"When quality is bad, product has to be rejected...men get upset and that affects my work...and when quality control come round and fiddle with plant that messes the line up and causes me problems...then I'm in trouble to get the production out". (C₃ A₈)

These issues which could be classified under the second broad category, sources of dissatisfaction not associated with opposites of sources of satisfaction, are discussed below. The range of issues defined by supervisors include the following subjects.

1. "Treatment" by management and the perceived status of supervisors. The respect supervisors feel they receive from subordinates and superiors.
2. Lack of feelings of teamwork and cooperation between section or departments within the plants.
3. Lack of clarity concerning role expectations of supervisors. For example, the required/preferred supervisory style and management's criteria for effective supervisory performance.

A minority of supervisor's discussed their sources of dissatisfaction with reference to working conditions in their immediate work environment (shift work patterns, rewards, conditions of work.) The comments below, however, are representative of the three main sources of dissatisfaction presented above.

"I'm pissed off with being a dog's body. They (management) treat you like children sometimes." (C₁ A₄)

TABLE 17 ANSWERS TO THE QUESTION "WHAT DO YOU
FEEL ARE THE MAJOR SOURCES OF JOB
DISSATISFACTION FOR YOU IN YOUR JOB?"

<u>RESPONSE</u>	<u>FREQUENCY OF RESPONSE (%)</u>
1. Non-achievement of production tasks, (breakdowns, absenteeism, "interference" in production process).	41%
2. "Treatment" by management and perceived status of supervisors. Respect supervisors feel from subordinates and superiors.	38%
3. Lack of clarity of role expectations of supervisors.	33%
4. Lack of feelings of teamwork and cooperation between production sections.	21%
5. Working conditions. (Shiftwork patterns, rewards).	14%

"You don't get the respect you should from workers or managers - or support from the boss - this is very frustrating". (C₂ A₈)

"We used to work as a team - like a big family - not anymore and a lot's gone out of the job for me". (C₁ A₃)

"I spend most of my time on the line but I get a rollocking from management for doing it - next they say 'you have to muck in with the men' - that's fine but I wish they'd make up their minds - I don't know what they want, sometimes I don't think they do". (C₃ A₇)

Table 17 illustrates the aggregated responses of supervisors to sources of job dissatisfaction individuals described in their work.

4.3.6 Work Motivation

This section concerns the responses made by subjects during the course of a discussion which had as its central theme work motivation, how highly motivated individuals felt they were at work, and what factors contributed to their own levels of work motivation. Both job interest and involvement at work were involved in discussions as many supervisors saw an overlap between the three concepts of work motivation, job interest, and involvement at work. As in the case of the discussion concerning job satisfaction and dissatisfaction there was often a period of clarification during the interview where the concept of motivation was discussed. During these discussions the author attempted to focuss the supervisors' attention upon the concept of motivation under investigation in this study, that is, the individual's desire to expend energy in the performance of a work task. Whilst the pre-planned questions (Figure 12) refer to levels of

effort and motivation in a non-specific manner, the preceding conversation directed the supervisor to think of motivation in the terms defined above. Supervisors' responses, however, were not always restricted to answers to this relatively confined definition and often included mention of job involvement and interest in work generally, which can be illustrated by the comments of supervisors presented below. These comments highlight not only the close association, perceived by supervisors, between work motivation and job satisfaction, but also the value placed upon interpersonal relationships by superiors.

"It depends on the satisfaction I get from my work- if I go home satisfied - I'm ready to put it in the next day". (C₁ A₄)

Referring to job interest, a supervisor commented on the role of job interest for his subordinates:

"I know if I keep my lads interested they work well - if not they don't get motivated and don't put the effort into their work". (C₃ B₉)

The "snowball" effect of motivation was seen as an important factor by several supervisors. This effect refers to the idea that there is some reciprocity between subordinate and superior motivation. For example:

"I can motivate the men by getting involved myself in the job - at least looking as if I'm interested with what they do - it's the same with me and my manager". (C₁ B₅)

A more direct cross-section of comments associated with the value of interpersonal relationships is exemplified by the comments by supervisors below.

"You know if your involved in your work - it's the most important thing for you, then it takes a lot to bring you

down - but they do it here...my manager is one example - I used to enjoy work - not now - my work has lost a lot because of him - I don't care as much now". (C₂ B₄)

"I have a good relationship with my lads on the shop floor - that's important for me - they know where they are with me and it's the same for me and Mr..... (manager), I would work that extra for him". (C₃ A₅)

A more negative, unfavourable comment concerns the detrimental effect of a poor relationship between the supervisor and his superior.

"My manager could do a lot to get me involved, more interested - but he doesn't - he keeps me in the dark and never a word of praise - I'm used to it now." (C₂ A₅)

Many comments concerned the important role played by interpersonal relationships in their work and their contribution to supervisors' and subordinates' work motivation. A majority of supervisors (39) described motivation (and job interest, job involvement) with reference to either job satisfaction or interpersonal relationships or both. Many of the remaining supervisors (14) focussed upon aspects of the organisational reward system (salary, overtime, time off, "perks", praise, promotion) and the remaining individuals highlighted pride and self-respect as two factors which determined how much effort supervisors would apply to their work tasks. This latter category can be seen as those supervisors who valued the more personal values of pride and self-respect which were outside the control or influence of the work organisation in comparison to the three other issues mentioned (i.e. job satisfaction, interpersonal relationships, and aspects of the reward system).

A breakdown of responses to the question "What sort of things do you think affect your level of motivation at work?" is described in Table 18.

Question 6(i) and 6(ii) were two questions designed to identify current motivational levels of supervisors. It has been determined in previous chapters that supervisors often receive criticism from managers and management commentators for their lack of motivation at work, sometimes verging on indifference. The two questions approach the problem of identifying motivational levels from two perspectives. The general, overall assessment 6(i), and the specific 6(ii) approach.

Responses to both questions varied widely from very highly motivated, applying as much effort to performance of work tasks as possible, to de-motivated, indifferent, applying only sufficient effort to maintain current position.

Some comments illustrating the wide variation in responses are described below.

"I'm not really interested anymore - I'm past all that - I couldn't give a monkeys about it as long as I don't get any earache". (C₂ A₅)

"Yes, I'm motivated to do a good job - I'm keen about my work, I don't think I could do any more or work any harder". (C₁ B₃)

Table 19 outlines the responses of supervisors to these two closely related questions, the patterns of which are similar in response distribution.

TABLE 18

ANSWERS TO THE QUESTION "WHAT SORT OF
THINGS DO YOU THINK AFFECT YOUR LEVEL
OF MOTIVATION?"

<u>RESPONSES</u>	<u>FREQUENCY OF RESPONSE (%)</u>
1. Job satisfaction and the effects of satisfaction at work.	42%
2. Interpersonal relationships with superiors and subordinates.	22%
3. Aspects of organisational reward system..	21%
4. Pride in doing a "good job" - self-respect.	14%

TABLE 19

ANSWERS TO THE QUESTIONS "HOW MOTIVATED
DO YOU FEEL IN YOUR JOB, AND (HOW MUCH
EFFORT DO YOU FEEL YOU PUT INTO YOUR
JOB, COULD YOU PUT MORE IN?)" *

<u>RESPONSE</u>	<u>FREQUENCY OF RESPONSE (%)</u>
1. Very, highly motivated. (High effort input, - as much as possible, - could not increase effort)	14% (19%)
2. Average, moderately motivated. (Medium, average effort input - "as much as anyone else")	45% (53%)
3. Low level of motivation, indifferent, apathetic, disinterested. (Low effort, could put much more in).	24% (18%)
4. Demotivated, not at all motivated.- feel negative about motivation. (Only enough effort to maintain current status quo).	16% (8%)

(* Responses to bracketed question in brackets)

4.3.7 Relationships with Subordinates

The following text refers to the responses of supervisors' towards questions about their subordinates and, specifically, their relationships with their subordinates. This subject was introduced as a discussion topic as the supervisors' subordinates comprise the work group with which the supervisor has regular daily contact. Many supervisors interviewed saw the shop floor work group as a significant factor in determining the performance of the department or section in terms of successful completion of production tasks. In so doing, the supervisors recognise the influence of the subordinate work group behaviour upon supervisors' work performance as supervisors often equate their own work performance with the departmental production performance.

Additional relevance for discussion of this subject derives from the fact that the supervisors' subordinate work group is commonly the place of organisational origin for the supervisor. He has usually worked as a member of the shop floor work group within the same organisation and there are, therefore, historical and probably some personal associations with the shop floor.

In the course of pilot study interviews, much conversation centred around how the supervisor supervises his subordinates, his relationship with the subordinate group, and his experiences as a member of that group. A general remark about subordinates' attitudes indicates the change that is seem to have taken place.

"The people have changed a lot - in my day they had more respect. They don't care much these days about work so I have to try and get them interested - the big stick won't work these days". (C₁ A₅)

A very common subject expressed by supervisors was the way in which supervisors supervised subordinates, often referring to their own experiences on the shop floor as an operative. For example:

"When I was there I tried to get away with anything I could, so I know what's what. Sometimes I let things go - you have to give and take or they won't respect you". (C₂ A₄)

Fairness and impartiality appeared regularly in discussion of how supervisors supervise, some supervisors described their own attempts to be objective in their style.

"....what can you do? - I've worked with them as friends and then you're their boss. It's difficult not to see their point but you need to be hard sometimes and cut yourself off a bit, I try to be as fair as I can with them". (C₂ A₃)

Several of the comments made by supervisors refer to the difficulty which supervisors experienced in making the career transition from shop floor operative to supervisor. When his colleagues become subordinates, the newly-appointed supervisor often experiences some anxiety and uncertainty in managing the shop floor work group. Some supervisors referred to the feeling of isolation they felt when first promoted to the supervisory level with respect to the "distance" from their ex-colleagues. Others described their initial regret of moving away from their peer group of several years and being viewed by their subordinates as a "traitor" having "sold out" to management, or as someone who had joined the "other side" (management).

Considering current relationships with subordinates, supervisors referred to a need to ensure the cooperation of their subordinates as the outcome of departmental production tasks and performance of those tasks was dependent upon the cooperation of the work force.

Supervisors mentioned "being friendly , but not too close" to members of the shop floor work group. Several, more experienced described the "old days" when the recognised authority of supervisors and foremen obviated any requirement on behalf of the supervisor to "encourage cooperation" or to establish a relationship which involved "give and take" and called for a supervisor to be "seen to be fair". Table 20 presents a synopsis of supervisors' responses to the question "How would you describe your relationship with your subordinates?".

Almost half of all supervisors interviewed were located in the first category of responses in Table 20, that is, the friendly, closely associated relationship group. This would appear to support data derived from the discussions of orientation and group membership presented earlier, which suggested that a majority of supervisors saw themselves closely associated with the shop floor work group in terms of group membership and allegiance. The second category in Table 20 refers to what is popularly defined as the traditional supervisory stereotype, the supervisor exhibiting a style which is "firm but fair", illustrating a cooperative, "give and take" relationship.

4.3.8 Role Ambiguity

Reference has already been made, in previous sections (Orientation, Job Satisfaction), to the subject of this section of the text. In the first reference to the subject, lack of role clarity or role ambiguity was described in terms of the ambiguous position the supervisor feels he occupies, receiving conflicting demands from both shop floor and management. Several comments have reflected the uncertainty the supervisor experiences when considering the group to which he belongs. For example, whilst managers apparently often encourage supervisors to feel part of the

TABLE 20 ANSWERS TO THE QUESTION "HOW WOULD YOU
DESCRIBE YOUR RELATIONSHIP WITH YOUR
SUBORDINATES?"

<u>RESPONSE</u>	<u>FREQUENCY OF RESPONSE (%)</u>
1. Very close, friendly, workmates, closely associated.	49%
2. "Firm but Fair". A good working relationship, not too close. "Give and Take" relationship. Cooperative.	36%
3. No longer part of the work group. Rejected, seen as part of management. Outside the shop floor group. Not friendly or close to subordinates. Firm with subordinates.	13%

management team, supervisors may feel they are treated as members of the shop floor work group.

The second reference to role ambiguity is apparent in supervisors' comments about evaluation of their job performance. Supervisors referred to their uncertainty concerning the criteria used by managers in determining effective supervisory performance. In discussing role ambiguity, supervisors were asked to think of areas in their work roles which may seem to be vague or ill-defined and which they felt were unclear. The pre-planned question which formed the nucleus of the discussion required the supervisor to identify ambiguous situations. Table 21 summarises response to this question.

In addition to group membership and job satisfaction, several other elements of the supervisor's role were defined by supervisors as what can be termed ambiguous. Relevant comments illustrating these elements are now presented.

"....it's difficult to know what's right when it comes to disciplining workers, you never know how far to go - you don't know if management will support you and end up playing safe". (C₁ A₃)

"I want to go further - promotion, and I'm not sure what management expects of me - how do they choose supervisors for management anyway?". (C₃ B₈)

Physical involvement in production line work was a concern of several supervisors, whether they should help out on the line or remain in a position where they could oversee and supervise the whole production operation provided a dilemma for supervisors.

TABLE 21 ANSWERS TO THE QUESTION "CAN YOU DESCRIBE SITUATIONS OR AREAS OF
YOUR JOB WHERE YOU FEEL UNCERTAIN OR UNCLEAR?"

<u>RESPONSE</u>	<u>FREQUENCY OF RESPONSE (%)</u>	<u>ATTITUDE</u>
1. Physical involvement in production tasks.	31%	28--/3N
2. Limits of authority concerning disciplinary issues.	29%	26--/3+
3. Criteria for effective supervisory performance.	24%	20--/4N
4. Group membership, orientation.	18%	14--/4N
5. Managing the relationship between the shop floor group, management and employee representatives.	12%	9--/3N

"If I work on the line to fill in I get it in the neck - then if I stand back and do what I'm paid for it's the same - I can't win! - they should call me bloody rubberman".

(C₂ B₃)

Those topics which were viewed by supervisors to be most ambiguous in terms of their role are included in Table 21. The most frequently quoted subjects being the physical involvement of supervisors in the production process and the limits of supervisors' authority concerning disciplinary issues. Nichols and Beynon (1977) recognise the former dilemma when quoting a steel mill manager in Pittsburgh:

"A man cannot work with his hands and at the same time give intelligent supervision to a gang of men, and a foreman who does this is apt to lose the control of the men..."

As can be seen from Table 21, a majority of supervisors in the pilot study sample associated these examples of role ambiguity with unfavourable, negative attitudes.

4.3.9 Status, Authority and Responsibility of Supervisors

The final category discussed during the course of interviews comprised the subject status, authority and responsibility of supervisors. The aim of these discussions was to identify how each had changed over the period of supervisors' work experience, and the current attitude of supervisors towards those subjects.

Status was described to the supervisors as feelings of self-worth, self-esteem, and respect received from other employees. Many supervisors saw the concept in terms of their "recognised importance" in the organisation. Responsibility was defined to supervisors as areas of work or duties for which supervisors were held accountable. Authority was described as the power to control and influence subordinates and other employees in the organisation seen by the supervisor to be instrumental to the successful achievement of the departmental production tasks.

These subjects have been grouped together because supervisors, during preliminary interviews, often discussed these subjects together. Many supervisors felt these subjects were associated. One common belief being that if the supervisor was responsible for an important part of the production activity and was accorded commensurate authority to supervise that group, then his status would be seen by many as considerable.

The sample of supervisors interviewed often referred to their perceived loss of status concerning their role. This was largely attributed to the decrease in responsibility and authority of the supervisory work role. The apparent loss of status was viewed, not surprisingly, as an unfavourable change, but the comparable decrease in responsibility was, in many cases, seen less unfavourably. The three pre-planned questions asked during discussion of these subjects were:

- (i) What status do you feel you have in the organisation? How do you feel about that?
- (ii) How much responsibility do you have in your job? How do you feel about that?
- (iii) How much authority do you have in your job? How do you feel about that?

A synopsis of answers to the above questions is presented in Table 22.

The majority of supervisors interviewed referred to a general reduction in levels of status, responsibility and authority during the course of their work experience as supervisors, about which they held, in each case except that of responsibility, a negative or unfavourable attitude.

Several comments concerning the changes that had occurred in each subject are presented below.

TABLE 22

ANSWERS TO THE QUESTIONS "WHAT/HOW MUCH STATUS/AUTHORITY/RESPONSIBILITY DO YOU HAVE IN YOUR JOB? HOW DO YOU FEEL ABOUT THAT?"

Response	Response Frequency	Authority		Status		To Status	Respons- ibility		To Respons- ibility
	Attitude (+/N/-)*		To Authority						
1. A lot, very much.		8	2N/6+	18	4N/14+	4	4+		
2. Quite a lot, a considerable amount.		14	4N/10+	11	3N/8+	8	2N/6+		
3. Average, not much, medium amount.		22	-16/6N	31	-15/8N/8-	19	6N/13+		
4. A little only, a little bit, a small amount		44	-36/6N/2+	34	-24/7N/3+	38	-3/4N/31+		
5. Hardly any, very little, virtually none		11	-10/1N	4	-4	29	-8/7N/14+		

(* + Favourable Attitude)

(N Neutral Attitude)

(- Unfavourable Attitude)

Referring to responsibility:

"We used to have to look after quality control, plan production figures - the lot - now there's a whole department - we just look after production now".

(C₁ A₇)

One comment illustrating attitudes about status was:

"We don't get the respect like before - from managers and workers - and so our status is less I think - we don't hire and fire any more". (C₂ A₉)

The authority of supervisors was seen to have been reduced over time, a typical remark was:

"Supervisors are like super-skilled operatives - we don't have the clout we had - for discipline and that". (C₁ A₄)

A final comment concerning the change in supervisory responsibility identified the favourable attitude which supervisors expressed towards the reduction in their responsibilities.

"...the job's a lot different now - other people do things supervisors used to do - they take the can back for that and that's good news for me". (C₃ A₄)

The issues of status, authority and responsibility were discussed in many cases with reference to the introduction of service departments, for example, Personnel, Industrial Relations, Training, Quality Control and Production Planning. These departments were usually seen to have assumed several tasks which were previously part of the supervisory work role. Whilst most supervisors felt that this situation led to a favourable attitude overall, a large group of supervisors believed this had led to a loss of status for the supervisor which, as mentioned above, was viewed as unfavourable.

The final stages of the supervisory interview were devoted to a discussion of those issues which each subject felt were most important to him in his work role, assuming this had not been covered during the earlier, more structured

stages of the interview. The responses relevant to those previous issues have been included in the appropriate section, the remaining subjects are presented below.

The subjects generated ranged from career development issues to general business topics (for example, market conditions, trends in trade union membership and activities). One recurring concern amongst supervisors was the impact of new technology and production methods upon the skill and variety content of production tasks. Supervisors referred to their belief that there are now less interesting jobs to perform in the production process, although some of the older, boring and repetitive jobs have been eliminated completely through automation.

4.4 . Interviews with Managers

The managers' interviews have followed the same format as that applied to supervisors' interviews, whilst the content differed substantially, the main topics for discussion are presented below, the main aim of the interviews being to elicit the managers' attitudes towards these topics and their perceptions of their behaviour as managers. The three main issues discussed during each interview were:

1. The Manager's perceptions of his own management style and the relationship with supervisors.
2. The Manager's criteria for effective supervision.
3. The Manager's perceptions of the supervisory role, and definition of the main tasks of the supervisor in the organisation..

These three subjects for discussion were chosen in order that the data generated from supervisory interviews could be placed in context, that is, the manager provided background data, a form of "backcloth", against which data from supervisory interviews could be presented. For example, individual supervisors often explained their attitudes towards subjects (Trade Unions, the personnel function, engineering department) with reference to work incidents and would commonly recount this during the interview. Discussion of the particular incident with one or more managers provided another perspective on the event and either confirmed or refuted the data surrounding the event. Other supervisors who experienced the same incident were also asked to give their views concerning the event, and this process produced a "consensus of reality".

A total of sixteen managers were interviewed for a period of between 1 - 1½ hours each, 6 at company 1, 4 at company 2, and 6 at company 3. As can be seen from Table 7, 84% of all production managers (immediate superiors of production supervisors) on site across the 3 organisations were interviewed, all of them returning the Manager's Questionnaire. The Manager's Questionnaire contained 34 task elements of the supervisory role, all of which were thought to be common across most supervisory jobs (adapted from Dowell and Wexley, 1978). This questionnaire formed one half of the supervisory task rating process in which both the supervisor's and his immediate superior's perceptions of the supervisory work role were assessed. Both manager and supervisor were required to evaluate the importance of 34 items reflecting the primary dimensions of the supervisor's job. Each manager was asked to complete one questionnaire for each supervisor who reported to him. At the end of the process of data collection each manager's questionnaire was paired with Section 4 of each supervisory questionnaire (the section referring to the rating of supervisor's tasks) and the discrepancy between managers'

and supervisors' perceptions of the supervisory work role evaluated (see "Drolper" variable in Analysis of Questionnaire Data).

4.4.1 Manager's Perceptions of Own Management Style and Relationships with Supervisors.

During interviews managers were asked to discuss "own management style", that is, how managers believed they managed subordinates and what kind of working relationships they enjoyed with supervisors. No manager in any of the three pilot study organisations managed more than five supervisors in any department.

Responses to the question "How would you describe your management style" are summarised in Table 23. Most responses indicate that managers see their own style as highly variable and dependent upon the individual supervisor.

Some examples of managers' responses are described below. The first exemplifying the variable style approach.

"There is no one style I use - it depends upon the individual supervisor, but I think I'm fair with my men".
(C₂ AM₃)

A more "disciplined" style which encourages a chosen distance between manager and supervisor is highlighted by the remark below:

"You must keep a distance with foremen, they need to respect you as a manager and you have to show them your the boss sometimes - otherwise they'll take you for a ride".
(C₁ DM₁)

TABLE 23 ANSWER TO QUESTION "HOW WOULD YOU
DESCRIBE YOUR MANAGEMENT STYLE?"

<u>RESPONSE</u>	<u>FREQUENCY OF RESPONSE (%)</u>
1. Variable, depends on individual and situation, no one style.	56%
2. Democratic, open-door, participative, involving others in decision-making.	21%
3. Formal, "distanced", "tight ship", disciplined approach.	15%
4. Closely supervised, "no trust" approach.	5%

TABLE 24 ANSWER TO QUESTION "HOW WOULD YOU DESCRIBE
YOUR RELATIONSHIP WITH YOUR SUPERVISORS?"

<u>RESPONSE</u>	<u>FREQUENCY OF RESPONSE (%)</u>
1. Close, friendly, cooperative working relationship, supportive.	59%
2. Formal, manager-subordinate relationship.	33%
3. Poor, conflicting relationship, personality - clashes between supervisor - superior.	4%

A small minority of managers referred to democratic management (or any associated concepts e.g. open-door approach, participative), one manager described the problem with a democratic style:

"....we don't have teamwork here - people don't trust each other enough; I try to be democratic with my supervisors but that has problems - you can't please all the people all the time. They need you to take a lead". (C₂ CM₁)

Relationships between supervisors and managers are described below. The majority of responses describe a close, colleagiate relationship with supervisors. A significant proportion of responses indicate a formal working relationship emphasising the hierarchical "distance" between supervisor and manager.

It should be mentioned that the most popular response category, indicating close and friendly relationships between supervisor and manager, is not supported by data from supervisors concerning their working relationship with their manager.

There is a wide range of styles adopted by managers in the sample, varying from democratic, "open" and participative to autocratic, "hands on", close supervision approaches.

Consistent with the variation of style employed by managers are their relationships with their supervisors, varying from helping, cooperative, and supportive relationships to a "controlling and directing" and "conflicting" relationship. The majority of managers do not, however, conform to the use of any one style or approach in managing subordinates. Perhaps the only conformity present is the absence of conformity. In this case, appropriateness, that is, adjusting styles and therefore working relationships to suit

individual supervisors, may be the pattern emerging from the results.

4.4.2 Criteria for Effective Supervision

Managers were asked to provide a set of criteria which they felt were requirements of the effective supervisor, the types of skills, abilities and knowledge a successful supervisor would possess.

This subject is included for purposes of comparison with supervisors' perceptions, in order to identify discrepancies between supervisors' and managers' ideas concerning the characteristics of a successful supervisor, which has particular relevance for the selection of potential supervisors.

One manager's remark was fairly typical of the majority:

"Ideally, the supervisor needs to be all things to all men - a father figure, a priest, a banker, a psychologist, and a leader. Technically he must understand the plant and what makes a quality product - he has to get on with engineers and Q.C. too". (C₂ BM₁)

Another refers to the past criteria which have been used to identify potentially successful supervisors. These criteria are mentioned by supervisors in their interviews as those which are currently employed by management.

"He used to be the best worker - timekeeper, reliable sort - not so important now. He needs the respect of the men much more and to get it he has to show he can do the job. He should be flexible and willing to learn and change". (C₂ CM₁)

The common elements arising from interviews with managers concerning their criteria for effective supervision were as described in Table 25. He is seen by managers as someone who is multi-skilled with a considerable experience of the shop floor production operation. Technical knowledge and man-management skills are two further factors identified by managers as contributing to successful job performance of supervisors.

4.4.3. Managers' Perceptions of the Supervisory Role

This section distinguishes itself from that preceding in that it refers to the tasks required of the supervisor in the performance of the supervisory job. There is, as determined by analysis of the comments of managers, a high degree of congruence between the three organisations, sampled with respect to the subject of this section.

Discussions during interviews with managers centred around the question "What do you feel are the major tasks required of a supervisor in this organisation?", the answers to which are summarised in Table 26. The selection of comments presented below reflect the discussion which had as its theme, the main task elements the manager perceived were most important for the supervisor to perform.

The control and organisation of labour assumed first priority for several managers, associated with planning and decision-making.

A relevant comment on this subject was:

"Our supervisors have to organise and control labour first and foremost. It needs planning and on-the-spot decisions. He has to keep them informed as to what they have to do... and checking quality and volume produced and changing things to meet targets". (C₃ CM₁)

TABLE 25 ANSWERS TO QUESTION "WHAT DO YOU FEEL ARE
THE IMPORTANT CHARACTERISTICS OF A
SUCCESSFUL SUPERVISOR?"

<u>RESPONSE</u>	<u>FREQUENCY OF RESPONSE (%)</u>
1. Multi-skilled with wide experience on shop floor.	42%
2. Ability to manage men. Management skills of leadership and communication.	41%
3. Technical knowledge of plant, machinery and product specifications.	38%
4. Reliable, trustworthy, possessing integrity, honest.	26%
5. Good worker, time keeper, keen, enthusiastic, motivated.	9%

TABLE 26 ANSWERS TO QUESTION "WHAT DO YOU FEEL ARE
THE MAJOR TASKS REQUIRED OF A SUPERVISOR
IN THIS ORGANISATION?"

<u>RESPONSE</u>	<u>FREQUENCY OF RESPONSE (%)</u>
1. Achievement of production output (volumes, quality levels).	57%
2. Planning, checking and modifying production variables (labour, plant, product specification).	33%
3. Organisation and control of labour. Communicating with and motivating labour.	25%

Some managers saw the task of checking volumes, quality and plant as a significant element of the supervisor's work role. Two examples illustrate this point:

"Checking the gear (production output) goes out the door first of all. Checking quality - setting up machines and organising the repair of breakdowns". (C₁ BM₂)

"Most of it's checking - quality, machines and people and putting things right when they go wrong. Sorting out people in their jobs, resetting a machine, or changing a raw material". (C₂ DM₂)

The majority of the sample of managers refer to the achievement of production output as the supervisor's main task. However, within this overall task there are several component tasks to which individuals refer individually. Table 26 incorporates these individual components in the umbrella term "Achievement of Production Output". Planning, checking and modifying production variables is self explanatory, referring to the sequential tasks of planning, monitoring and adjusting as necessary, the variables which influence the production process. The organisation and control of labour is seen by many managers as a separate task involving elements such as communicating with subordinates, motivating subordinates, and applying the disciplinary system which is prevalent in the organisation.

4.5 Summary

The main objective of this chapter has been to present the results of analysis of questionnaire and interview data arising from the pilot study. The aims of the pilot study were to test the data collection methods and examine the data to determine whether there was consistent support for

the research hypotheses and theoretical model. The major changes in data collection methods which have taken place as a result of the pilot study results are the questionnaire scales of job motivation and need for clarity. In the former case the scale has been extensively modified and lengthened in an attempt to improve internal consistency, which has subsequently been achieved. In the case of the latter scale the process of "scale purification" was successfully performed.

A total of 61 supervisors and 16 managers were interviewed in the three pilot study organisations, and 58 completed supervisory questionnaires were received by the author which form the basis for the analysis of questionnaire data (having been paired with the appropriate management questionnaire, all of which were returned completed to the author).

A profile of the supervisors participating in the pilot study sample was presented indicating the mean supervisory age, number of years in a supervisory position, the number of subordinates supervised, and the number of years the supervisor had spent in the position prior to becoming a supervisor. The typical supervisor in the pilot study sample was 47 years old and had spent, on average, 9 years in the role of supervisor. He was responsible for 17 subordinates who reported directly to him and had occupied his previous position, prior to achieving the supervisory position, for an average of over 7 years. The analysis of reliability of the modified questionnaire scales indicated an acceptable level according to the criterion specified by Nunally (1967). The Kruskal-Wallis test applied to the three groups of supervisors (3 samples) support, with the exception of the variables, "discrepancy between role perceptions of supervisors and managers" and "job motivation", the suggestion that there is a lack of significant difference between the three groups of samples across the variables described in Appendix 3.0 and 3.9

Evidence for the support of Hypothesis 1 below, is provided by the results of a Mann-Whitney U-Test which was applied to scores of a sample of supervisors and managers on the role ambiguity scale.

Hypothesis 1: The existence of role ambiguity is a commonly occurring characteristic of the production supervisor's role.

The result of the test suggests support for the statement that the level of role ambiguity experienced by supervisors in the pilot study sample is greater than that of the managers in the management sample. In the absence of mean values of scores on the ambiguity scale for other groups from other research studies, it is difficult to provide further positive supporting evidence for Hypothesis 1. However, in the case of the supervisory sample the mean score on the scale was 43.8 which (S.D. 8.5) is slightly higher than the mid-point of the scale (42.0).

The remaining research hypotheses are described below and the associated evidence for their support is presented. The evidence for support (or rejection) of hypotheses comes from both questionnaire and interview data. With reference to Hypothesis 2 and 3 below, whilst no clear direct relationship can be identified between job motivation and role ambiguity from the interview data, there are indications of possible relationships. That is, one source of job motivation is seen as job satisfaction (mentioned by 42% of all supervisors) and the lack of role clarity is described by 33% of all supervisors as a source of dissatisfaction. So, in that job satisfaction is apparently negatively related to role ambiguity and job motivation and satisfaction are positively linked, there is an indirect negative relationship between role ambiguity and job motivation. In addition, supervisors describe their attitudes towards situations which involve ambiguity as generally unfavourable.

Hypothesis 2: Role ambiguity has a significant influence upon the work motivation of the production supervisor.

Hypothesis 3: Role ambiguity is negatively related to the work motivation of the supervisor.

Evidence from the statistical analysis of questionnaire data indicates some support for Hypothesis 2 and 3. The analysis performed was Spearman-Rank correlations, the results of which included the correlation coefficients (r_s) between the variables measured, and their level of significance. The correlation coefficient for the two variables job motivation (JOBMOT) and role ambiguity (ROLAMB) can be seen from Table 5 to be -0.24 which, although modest in size, is significant at the .05 level of significance and in the hypothesised direction, that is there is a negative relationship between job motivation and role ambiguity.

Hypothesis 4 concerns the suggested mediating role of need for clarity in the relationship between role ambiguity and job motivation.

Hypothesis 4: The effect of role ambiguity upon motivation is mediated by the individual supervisor's need for clarity. The results of partial-correlation analysis indicate no support for this hypothesis, the correlation between role ambiguity and job motivation is not significantly different between the two cases when the influence of need for clarity is controlled and not controlled. However, the lack of clear role expectations of supervisors is quite commonly (33% of supervisors mentioned lack of clarity) described as a source of job dissatisfaction.

Hypothesis 5: The quality of the communicating relationship between the supervisor and his immediate superior is negatively related to the degree of role ambiguity experienced by the supervisor.

The results of interviews concerning the subject of communication between supervisor and superior suggest that supervisors commonly feel that their communicating relationship with their superior is not good. A majority of supervisors when asked the question "Do you feel the information you receive from your superior is (1) timely (2) trustworthy (3) useful, and (4) adequate, responded negatively to all four subjects. In discussions of role ambiguity, 3 of the situations which supervisors described as leading to feelings of uncertainty, can be directly linked to the effectiveness of communication between supervisor and superior (Response Categories 1,2 and 3 in Table 21). Statistical evidence from the Spearman correlation analysis shows a negative and significant relationship ($r_s = -0.23$, $p = .05$) between role ambiguity and the quality of communicating relationship between the supervisor and his immediate superior.

The final research hypothesis described the proposed relationship between role ambiguity and job satisfaction.

Hypothesis 6: Role ambiguity is negatively related to the job satisfaction of supervisors in the study.

Clear support for the hypothesis exists from the result of correlation analysis. The relationship between job satisfaction was found to be negative and significant at the .001 level ($r_s = -0.49$), and is the second largest coefficient in the correlation matrix (Table 9).

Evidence from the interviews is less clear. Whilst lack of clarity concerning role expectations has been described by supervisors as a source of job dissatisfaction, to relate lack of clarity to job satisfaction assumes that dissatisfaction is the opposite end of the satisfaction scale. There is some data to support the view that supervisors view job dissatisfaction as the opposite of

job satisfaction. When identifying sources of dissatisfaction many supervisors described the opposites of "sources of satisfaction". Unfortunately, lack of clarity was not one of these opposites, as it was not included in the list of sources of satisfaction in its converse but only in the list which included sources of dissatisfaction. However, it seems likely that items in the sources of dissatisfaction list would be negatively correlated with job satisfaction, and it may be that lack of role clarity (or role ambiguity as the concept has been defined) is negatively related to job satisfaction, but only influences job satisfaction when it exists at high or at least discernable levels. The absence of "lack of role clarity" or put more clearly, the existence of high (and acceptable) levels of role clarity (low values of ROLAMB) may not have the same negative relationship with job satisfaction which exist for low levels of role clarity (high values of ROLAMB).

Major changes in the supervisory role, from the viewpoint of the role incumbent, have been examined during interviews with supervisors and the results indicate the significant influencing role which managers and managerial decisions have played in affecting the supervisor's role perceptions and attitudes to aspects of his work.

Discussion of orientation and group membership investigated the thesis that supervisors still occupy a "man in the middle" position. The results tend to show that, at least from the supervisor's perspective, he occupies a position much more closely aligned to the shop floor work group than is suggested by the thesis mentioned above. Criteria for an effective supervisor have been defined by the supervisors and managers in the sample. There is close agreement between the criteria and the ranking of the criteria (using frequency of response as an indicator). Main sources of satisfaction and dissatisfaction for supervisors seem to

focus upon the achievement (and non-achievement) of the production tasks of their section/department. Motivation is mainly influenced, according to supervisors' responses, by job satisfaction and the effects of job satisfaction, with interpersonal relationships at work taking second place in the frequency of response rank.

Both the authority and status of supervisors appear to have been reduced over the period of supervisors' work experience and these changes are associated with mainly negative attitudes towards the subject. Levels of responsibility have also been reduced for supervisors but here, unlike status and authority, a predominantly positive and favourable attitude is associated with these changes.

CHAPTER FIVE

RESULTS OF THE MAIN STUDY

5.0 Introduction

This chapter describes the results of the data analysis from the main study, involving both interviews and questionnaires. The organisational contexts from which the sample of supervisors was drawn are presented, and an analysis of the supervisor's role is performed. The unit of analysis utilised in the analysis of the main study data is the individual supervisor. The only exception to this approach occurs when role perceptions of supervisors are paired with perceptions of the supervisor's role by managers for comparison.

On conclusion of the pilot study data analysis, a review of the results highlighted some important research "signposts" for the direction which the main study was to take. Both data from interviews and questionnaires suggest that ambiguity was experienced by supervisors, and at a level significantly higher than that experienced by the sample groups of managers. In addition, a moderate Spearman correlation coefficient ($r_s = -0.49$), which is significant at the .001 level, was found to associate the two variables, role ambiguity and job satisfaction. Whilst the relationship between role ambiguity and job motivation ($r_s = -0.24$) was found to be negative and significant at the .05 level.

It was therefore felt that the pursuit of the strength of the influence and effect of role ambiguity upon the work attitudes of the industrial supervisor, particularly focussing upon work motivation, was justified.

The total number of supervisors interviewed ($N = 127$) does not correspond to the total number of supervisors

TABLE 27 ANALYSIS OF DATA COLLECTION BY PARTICIPANT ORGANISATIONS

ORGANISATION	INTERVIEWS COMPLETED		COMPLETED QUESTIONNAIRES RETURNED		TOTAL NO. * OF COMPLETE DATA SETS (5)	SUPERVISORS ON SITE (TOTAL) (6)	MANAGERS ** ON SITE (7)
	S (1)	M (2)	S (3)	M (4)			
4	14	6	11	6	7	19	9
5	20	7	17	6	10	23	9
6	15	5	8	3	9	18	7
7	27	6	19	4	11	34	9
8	17	6	7	4	9	18	15
9	34	11	29	9	21	39	16
TOTALS	127	41	91	32	67	147	65

ORGANISATION	INTERVIEW RESPONSE (%)		QUESTIONNAIRE RESPONSE (%)	
	S ¹	M ²	S ³	M ⁴
4	74	67	58	67
5	87	78	74	67
6	83	71	44	43
7	79	67	56	44
8	94	40	39	26
9	87	69	23	56
MEAN RESPONSE:	84%	77%	49%	51%

S = Supervisor
M = Manager

* Excluding spoiled questionnaires from Total

** Refers to immediate superiors of supervisors

1 - column (1) ÷ (6)
2 - column (2) ÷ (7)
3 - column (3) ÷ (6)
4 - column (4) ÷ (7)

comprising the sample in the questionnaire data analysis. The latter sample ($N = 67$) refers to the number of completed, returned supervisory questionnaires which could be matched with managers' questionnaires, thereby completing 67 full data sets. The discrepancy between the total number of supervisory interviews conducted, and the final supervisory sample can be explained by the analysis shown in Table 27. Whilst a total of 127 supervisory interviews and 41 managers' interviews were completed, 91 supervisory and 32 managers' questionnaires were returned unspoiled to the author. From the returned questionnaires, 67 complete data sets (manager and relevant supervisor's questionnaire) were compiled.

On average, 84% of all supervisors at each plant were interviewed and 77% of all managers. In terms of the rate of completion and return of questionnaire from those supervisors interviewed, the response rates for supervisors and managers were 49% and 51% respectively.

5.1 Organisational Context

Five of the six participant organisations comprising the main study sample fall within the bread and bakery products manufacturing sector of the food products manufacturing industry. Each of the five organisations above were all members of the same food group and largely similar in product and process specification at each site. However, each manufacturing unit is organised as an individual profit centre within the group, with a chief executive at each site.

The sixth organisation represents the largest food manufacturing division in the UK of an international consumer goods manufacturer. The site of the production operation employed over 1,000 individuals and represented the largest site sampled. The geographical location of each organisation is as follows:-

<u>Organisation:</u>	<u>Location:</u>
4	EAST ANGLIA
5	S.W. WALES
6	S.E. ENGLAND
7	N.W. ENGLAND
8	W. SCOTLAND
9	EAST ANGLIA

The production systems in each plant operated a shift system, in five out of six of the organisations this involved a 3-shift operation. One clear difference between the supervisory groups at each plant was the type of formal training experienced and qualifications gained by one group of supervisors, that is, many of those in Company 9. Here the majority of supervisors interviewed (over 55%) had received some formal training (e.g. day-release) and had achieved a recognised qualification (NEBSS). As was the case with the pilot study sample groups, an analysis of variance was performed between the 6 sample groups (i.e. organisations participating) on the same variables as those in the pilot study. The Kruskal-Wallis analysis of variance test was performed across the 6 groups on the variables job motivation, quality of communicating relationship between supervisor and manager, age of supervisor, number of years as supervisor, need for clarity, job satisfaction, role ambiguity, overall rating of relationship between supervisor and manager (as rated by the supervisor), accuracy of the supervisor's role perceptions, and the number of subordinates who report to the supervisor. Appendices 4.0 to 4.9 describe the results of the analysis by each of the ten variables.

The results of the Kruskal-Wallis analysis indicate that the "number of subordinates" (NO SUBS) and "number of years as foreman" variable (YRS FMAN), have a level of significance sufficiently low to reject the Null Hypothesis that there is no difference amongst the

6 groups of the average score on the variable in question. In this case the Null Hypothesis is rejected in favour of the Alternative Hypothesis that the 6 groups are not the same in their average scores on the "number of subordinates" variable (NO SUBS). However, for most variables (the remaining 8), the Null Hypothesis that there is no difference between the groups on the average scores on the variables, cannot be rejected (at the .05 level of significance).

5.2 Supervisory Profile

An overall supervisory profile of the total group (N = 67) of supervisors comprising the total number of completed data sets (Table 27) is illustrated by Table 28 and describes some summary biographical data of the supervisors sampled.

A total of five supervisors in the main study sample were female (7.4%), four of those supervisors being responsible for predominantly female labour. All those supervisors included in the main study group sample worked within the production function of each organisation, located in manufacturing and responsible for the achievement of traditional production objectives. For example, the objectives of volume of output, quality and cost of production. The average span of control of supervisors in the food plant studied by Child and Partridge (1982) was 28, compared with 29 found in the current study. 88% of all supervisors in the main study had experience of working on the shop floor as an operative. The remainder had reached the position of supervisor through a variety of routes. These included individuals who had crossed functions from, for example, work study (industrial engineering), research and development, or quality control to the production function. Others had applied for their current jobs as a result of

TABLE 28

SUPERVISORY PROFILE (N = 67)

<div>VARIABLE STATISTIC</div>	AGE OF SUPERVISOR	NUMBER OF YEARS AS SUPERVISOR	NUMBER OF SUBORDINATES	NUMBER OF YEARS IN PREVIOUS POSITION
MEAN	40.7	5.6	29	5.3
STANDARD DEVIATION	10.5	4.8	28	5.5
MINIMUM	22.0	1.0	2	1.0
MAXIMUM	62.0	20.0	102	22.0

redundancies in other parts of the industry or as a result of work preference.

The level of unionisation amongst supervisors in the sample was 86%, significantly higher than the national average for all industries in 1979 which was thought to be approximately 40% (Partridge and Child 1982). The three main Unions concerned were A.S.T.M.S., M.A.T.S.A. and the supervisory branch of the Bakers Union. Discussion concerning reasons for joining a union or association revealed that the most common were:

- (i) To provide a form of employee "protection" (51%)
- (ii) As a response to a specific event or
incident occurring in the organisation (24%)
- (iii) To negotiate on the individual's behalf
to improve pay and conditions (17%)

Over 92% of all supervisory members of a union fell within the three categories above. The remaining group of supervisory union members were either unsure about their motives for joining a union or felt they had to as they believed everybody else was in the union. Nicholas and Beynon (1977) in their book "Living with Capitalism" refer to the need of the foreman for protection which is met by his union membership. In this study, over half of the majority group (95%) felt the 'need for protection' referred to by Nicholas and Beynon.

Those supervisors not members of any union or association explained their situations in terms of either:

- (i) Strong principles against/feelings about
the role of Trade Unions generally in
industry. (4%)
- (ii) They had been expelled or "blackened" by
a union for working when a strike had been
called (or some other misdemeanor). (1%)

Child and Partridge (1982) found that the most frequently mentioned reason for supervisors joining unions referred to a "group norm of membership" and was described by 45% of supervisors as "because most people here are members". This reason was mentioned most often in the engineering plant studied by the authors.

Other reasons for joining unions identified from data from the food plant studied were defined by Child and Partridge as normative, for example, "because I think everyone should be in a union", was one such reason provided by supervisors. The study summarised the rationale for most supervisory membership to unions as "collective strength in relation to the company rather than against their own immediate superiors".

The findings of the current study would tend to support those of Child and Partridge in that the majority of supervisors interviewed (51%) refer to the general need for "employee protection" which membership of the union satisfies. The issue of 'employee protection' referred to here describes the protection of the employee from what supervisors described as "the company". 24% of all supervisors in the main study referred to a specific event or incident which had caused the supervisors to join the union. This included such issues as disciplinary action against a supervisor (or supervisors), "lack of managerial support" or threat/recent history of redundancies or dismissals among the supervisory group. 17% of supervisors said they had joined the union mainly so that it may negotiate on their behalf for better pay and conditions.

In the latter part of this chapter a role analysis of the supervisors in the main study sample is described with

further reference to the supervisor's work context.

5.3. Analytical Methods

There are two underlying types of analysis performed in the analysis of the main study data. The first, which has been used to isolate themes and common attitudes from the interview data, is content analysis, the detail of which has been described in Chapter 3. The second group of analytical techniques has particular relevance to the hypotheses presented in Chapter 3. These techniques are mainly non-parametric statistical methods of analysis including non-parametric correlation analysis (using Spearman Rank correlations), and tests for identifying differences between groups. Another analytical technique which has been employed to isolate relationships between the variables in the theoretical model and to evaluate the explanatory value of the model is multiple regression.

As in the case of the pilot study, the internal consistency measures of the reliabilities of the scales used in the supervisory questionnaire were determined.

The modified motivation scale was previously analysed and its reliability index was found to be in excess of 0.75. This result is consistent with the value which can be predicted by the formula below concerning the reliability of a lengthened scale.

$$r^* = \frac{k \cdot r_1}{1 + (K-1) r_1}$$

where r^* is the reliability of the lengthened test,

k is the factor by which the test has been lengthened,

and r_1 , the reliability of the original test.

Substituting the relevant values into the above equation:

$$r^* = \frac{4 \cdot 0.45}{1 + (3 \cdot 0.45)} = \frac{1.8}{2.35} = \underline{\underline{0.76}}$$

The method of content analysis of interview data which has been adopted in this study can be described as a qualitative analysis of interview notes. The mechanism utilised to isolate supervisors' attitudes towards the subjects discussed involved, initially, the classification of all interview data under the subject categories defined earlier (Figure 12, Chapter 3).

The responses of supervisors towards these subject categories were then recorded in note form by the author and subsequently classified into the response categories presented in the answers to each question (see Table 31A, for example). Some of the data generated by interviews could not be neatly classified into any one subject category and account for the discrepancy which exists in some tables of response frequencies between the total frequency and 100% (clearly, the total sum of all responses will exceed 100% where an individual has mentioned more than one response category in his reply to a question).

The interpretation of the interview notes and comments made by supervisors is based upon an understanding and subjective interpretation of the language used by

supervisors. There are, however, several advantages from which the author has benefited in terms of achieving an improved level of validity of results. In the course of interviews in this study, discussion of a subject occurred as a result of, initially, specific questioning by the author. Following this initial phase the supervisor often expressed an attitude towards the subject under discussion, followed by some anecdotal evidence to support that attitude or to explain why that attitude was held.

This can be seen as an example of one method of supporting or checking that the attitude has been recorded as it was expressed. In the following text concerning interview data, some anecdotal information is presented to illustrate the value of this type of data.

One further advantage which the author has exploited has been his knowledge of supervisory work systems, the tasks, and the shorthand or jargon often used by supervisors. In terms of exchanging information during interviews, an understanding of such rich descriptive terms as "deadleg", "rag-bag", "lifer" and "baron" and technical terminology

such as "pot", "slingsby", "rack-off", "roundabout", "knives" and "bechtel" has been useful. The knowledge of these terms is not critically important in itself, but negates the requirement to interrupt or stop discussions for clarification, which may inhibit the flow of conversation.

5.4 Scale Reliabilities

Table 29 summarises the results of the reliability index test applied to the scales in the supervisory questionnaire, using the main study data (N = 67). The scales appear to fulfil the criterion suggested by Nunnally (1967) as an acceptable minimum range for a developed scale (0.7 - 0.9). The measure cited throughout this study which has been employed as an index for scale reliability is Cronbach's alpha (Cronbach, 1951) which has been described as a conservative estimate of internal consistency of tests. Cronbach's alpha is referred to by Zeller and Carmines (1980) as probably the most popular coefficient used as a measure of internal consistency or "equivalence". As described earlier, the scale lengthening process (increasing the number of items) increases the correlation among the items, and therefore α takes on a larger value.

There are several advantages of using the above measure, which can be illustrated by the following desirable properties of Cronbach's alpha. Firstly, the coefficient is a general reliability coefficient encompassing both the Spearman-Brown formula, and the Kuder-Richardson (20 and 21) forms. Secondly, it makes use of all the information contained in the items (their number, variances and covariances), and it is relatively easy to compute.

TABLE 29

MAIN STUDY SCALE RELIABILITIES (N = 67)

<u>SCALE</u>	<u>CRONBACH, α</u>
N Clarity *	0.83
Job Motivation *	0.71
Job Satisfaction	0.76
Quality of Communicating Relationship	0.72
Role Ambiguity	0.82

* Modified forms of scale.

5.5 Results of Supervisory Interview Data Analysis

5.5.1 Major Changes in the Supervisory Role

The discussion of this subject was included in the interview content in order to identify the major changes supervisors felt had occurred in their experience in the supervisory role. The question initiating discussion of this subject was "What do you feel are the major changes that have occurred in your job (and the Company) since you first became a supervisor?", and was designed not only to elicit what are seen as significant changes, but also the supervisors' attitudes towards those changes.

Significant changes affecting the supervisory role in the recent past have been described by several researchers (for example, Thurley and Wirdenius, 1973) as an "erosion" of the supervisory role, and include the following influences:

- (i) The increase in the power and status of shop floor trade unions and their representatives.
- (ii) The erosion of the differential between supervisors' and workers' pay.
- (iii) The introduction of "specialist" functional departments (e.g. industrial engineering, quality control, personnel, industrial relations and production planning).
- (iv) The introduction of graduate or trainee managers occupying a supervisory role for a limited period.
- (v) The discrepancy between supervisory responsibility and authority. This refers to the situation where a supervisor may find himself responsible for aspects of the work system over which he has little or no authority.

In addition to the objectives of eliciting data concerning changes in the supervisory role and supervisors' attitudes towards them, evidence to support (or disconfirm) the five influencing factors described above was sought.

Only a small minority of supervisors in the main study (5) as in the pilot study (12), referred to their "other" company experience, whilst the majority focussed upon their work experience with their current employer.

The main study interview data has followed a similar pattern to that of the pilot study in that two broad categories of responses to this subject were identified. The first, summarised below, refers to the changes in management personnel and changes attributed to managerial decisions. Again, as in the results of pilot study

interviews, a majority of supervisors (64%) described changes in their work situation to management changes (and managerial decisions) in unfavourable or negative terms.

Category 1: References to Changes in Management

In summarising the responses of supervisors which have been classified in the above category, there are clear references to the five factors which were described earlier as having had a significant influence upon changes in the supervisory role. Supervisors refer to the erosion of differentials between supervisors' and workers' pay, the introduction of specialist departments, the introduction of trainee and graduate managers and the reduction in their authority and status, and attribute these changes to managerial decisions and changes in management personnel. The majority of responses indicate a largely unfavourable attitude towards these changes. Changes in the physical aspects of the production facilities and new technology which has been introduced are seen in mainly positive terms by supervisors, many recognising the benefits which can be gained in plant efficiencies and productivity.

Supervisors in the main study sample commonly mentioned some aspect of "management style", either in describing their own manager or with reference to senior management. The most popular issues, in terms of the frequency with which they were raised, were discipline at work and the management of trade unions.

A general decline in discipline of employees at work was expressed by those supervisors who felt it was a significant change, and the cause of this change was linked to managers who were thought to be "too weak". The second issue concerned the perception of supervisors

that managers had been "soft" in their dealings with the union generally. This had caused, according to many supervisors who raised this point, the unions to achieve power too quickly and act in an irresponsible manner in the way they used that power.

There were several comments concerning the changes which had taken place to supervisory work tasks. Reflecting the results of the pilot study, supervisors described the reduction in the physical work aspects of supervisors' tasks and a decrease in the variety of tasks in the supervisor's job. Some supervisors felt their jobs had been reduced to those of "super-skilled operatives" with an associated reduced level of authority. One individual expressed perhaps the most extreme view with his comment concerning authority:

"I can't even tick a man off now without being dropped in it".
(D₁ E₂₄)

Many unfavourable attitudes were associated with changes in task variety and authority in the supervisor's role, but there were clear positive and favourable attitudes to the reduction of physical work. A minority of supervisors felt that they now spent a greater proportion of their time dealing with "people problems" which provided variety and interest.

Category 2: References to Changes in Other Aspects of the Supervisory Work System.

Supervisors' responses not classified into those changes which can be assumed under the general heading of changes in management personnel or resulting from managerial decisions, are included in the group of subjects discussed under the general heading "changes in other aspects of the supervisory work system". These subjects are:

- (i) Work Force Attitudes.
- (ii) Legislation.
- (iii) Trade Union Power.
- (iv) Supervisors' Responsibility.

Over one-fifth of all supervisors interviewed described changes in the attitudes of work force. Many felt that workers' attitudes had changed significantly over their work experience as supervisors. The general view was that changes in workers' attitudes were "for the worse." Supervisors described a "lack of interest in work" and "no pride in their work" as two common attitudinal changes.

Legislation, specifically the Health and Safety at Work Act, and the Employment Protection Act, was a subject towards which supervisors held mixed attitudes. Most of those supervisors referring to legislation as a significant change in the supervisory work role, felt that the Health and Safety at Work Act was a positive, favourable change and made a positive contribution to conditions in the workplace. The remaining legislation was seen in clearly negative, unfavourable terms. Specific reference was made to the Employment Protection Act which was seen by several supervisors as contributing to the already difficult task of dismissal even for serious misdemeanors at work.

Whilst the impact of the increase in the power of trade unions in the workplace is attributed to managerial decisions (and reported in Category 1), supervisors mentioned the increase of trade union power in industry generally, often remarking that unions had acquired too much power too quickly. Supervisors see the influence of this change as a further complication in the supervisor-subordinate and supervisor-superior relationships. This

aspect of the perceived effect of legislation was viewed unfavourably by supervisors describing legislation as a major change.

The final subject comprises supervisors' perceptions of, and attitudes towards, supervisory responsibility. Those supervisors describing this subject as a change in the supervisory role, referred to a decrease in the responsibility of supervisors in their current role with respect to areas of supervisory work for which they were previously responsible. Overall, attitudes towards this change were mainly favourable. This section of the data provides contradictory evidence to that presented in the pilot study data. In the pilot study supervisory responsibility was perceived to have increased, yet many supervisors felt there was little responsibility in their work. In the main study supervisors felt there had been a decrease in their responsibility and the responses to this change were mainly favourable. In both samples, supervisors felt low levels of responsibility in current work roles, which were associated with positive, favourable attitudes in both groups. An example of supervisors' comments concerning reduced levels of responsibility involved product quality and plant repair and maintenance, whilst comments concerning increased responsibility from the pilot study referred to the additional responsibility supervisors felt due to the effects of the Health and Safety at Work Act.

Table 30 summarises the attitudes of supervisors towards the subjects raised as major changes in the supervisory role in both Category 1 and 2 and the frequency with which they were mentioned by supervisors.

The most frequently mentioned subject area for the main study sample was changes in managerial personnel and changes effected by managerial decisions. The same subject

TABLE 30
SUBJECTS IDENTIFIED AS MAJOR CHANGES IN THE SUPERVISORY ROLE (N = 127)

SUBJECT	ATTITUDE ¹	FREQUENCY ²	RANK
1. Managers, Management Style	-75/9N/16+	100	1
2. Differentials (Pay)	-48/2+	50	2
3. Physical Work Element	- 3/2N/38+	43	3
4. Authority/Status	-31/9N/2+	42	4
5. Variety of Supervisory Tasks	-26/8N/4+	38	5
6. Legislation	-14/7N/16+	37	6
7. Physical Production Facilities	- 4/6N/26+	36	7
8. Introduction of Specialist Depts.	-24/4N/6+	34	8
9. Supervisory Responsibility	- 7/2N/21+	30	9
10. Attitudes of Work Force	-20/4N/2+	26	10
11. Trade Union Power	-17/3N/4+	24	11
12. Trainee Managers	-18/2+	20	12

1	2
- = Unfavourable	Frequency of Mention
N = Neutral	
+ = Positive	

was ranked as the most frequently mentioned change in the supervisory work system. In both cases a large majority of supervisors attitudes were unfavourable towards this subject area (77% of the pilot study, 75% of the main study).

The comments of supervisors in the main study lend support for the conclusion reached in the pilot study. This suggested that supervisors recognise the power of management to implement change. There is also an implicit acceptance amongst supervisors that managers can considerably influence the success of the supervisor in achieving supervisory work targets. Again, the main study interview data confirms the pilot study results in the finding that supervisors feel that managers have a largely negative effect upon the achievement of supervisory work targets.

The second, most popular issue mentioned in the main study was the change in differentials (associated with an overwhelming negative attitude) which was not seen by supervisors in the pilot study as a major change in the supervisory work system. Similarities are encountered in the first six rankings from both pilot and main study results. Legislation, the physical work element of supervisory tasks, supervisors' status, all appear in both rankings.

From both data sets (pilot and main study) there is evidence for the support of the five statements concerned with apparent "erosion" of the supervisory role in the recent past (see 5.5). Confirmation of the negative or unfavourable effect, from the viewpoint of supervisors, is apparent from the attitudes illustrated in Table 10 and Table 29. The causes of the "erosion" of the supervisory role is mainly attributed by supervisors in both samples to managers and managerial decisions. Only the increase in the power and status of shop floor trade unions and their representatives was described as outside the sphere

of control and influence of management.

5.5.2 Orientation and Group Membership

This subject was discussed to determine whether the sample of supervisors felt "members" of, or oriented towards a particular work group (e.g. the management group, supervisory group, shop floor work group, employees of the company).

If, as Nealey and Fiedler (1968) have suggested, the largest gap in the organisational hierarchy exists between the supervisor and his manager, it would be unlikely that supervisors would feel oriented towards, or members of, the management group or "team". If such a gap exists, and supervisors were encouraged by managers to feel part of the management team, whilst seeing themselves as members of another group, this could provide evidence for part of the explanation of why role ambiguity may be experienced by supervisors.

Discussion involving the above subject has relevance for determination of the current validity of the "man in the middle" thesis, developed by Roethlisberger (1945) and subsequently referred to by others (Wray 1949, Patten 1968), which suggests that the supervisor is neither "fish nor fowl", falling between the two stools of management and work force.

Table 31A and 31B present the responses to the three questions posed to supervisors when discussing the issue of orientation and group membership. In the main and pilot study sample of supervisors a majority of supervisors expressed feelings of membership, association and allegiance to the shop floor work group. Considering both samples, at most about one third of all supervisors felt

TABLE 31A ANSWERS TO THE QUESTION "TO WHICH WORK
GROUP DO YOU FEEL MORE CLOSELY ASSOCIATED?"
(N = 127)

<u>RESPONSE</u>	<u>FREQUENCY OF RESPONSE (%)</u>
1. To a Shop Floor Work Group.	71
2. To the Supervisory Group/ Middle Group between Managers and Workers.	19
3. No Group/Company Employee/ Not Sure/Don't Know	5
4. To the Management Team/Group	4

TABLE 31B ANSWERS TO THE QUESTION "OF WHICH WORK GROUP
WOULD YOU SAY YOU WERE A MEMBER?" (DO YOU
FEEL ANY ALLEGIANCE TO ANY ONE WORK GROUP, IF
SO, WHICH ONE?)" (N = 127)

<u>RESPONSE</u>	<u>FREQUENCY OF RESPONSE (%)</u>
1. Shop Floor Work Group	59 (54)
2. Supervisory Work Group	23 (38)
3. No Group/Company Employee/ Not Sure/Don't Know)	15 (7)
4. Member of Management Team/ Group	3 (1)

closely associated with the supervisory or middle group between workers and management. Discussions of this subject revealed that supervisors often explained their orientation to the shop floor work group with reference to their social background and the need for cooperation with the shop floor work group to achieve production tasks. An associated aspect of this issue was the belief, that some supervisors expressed, that supervisors required the continual cooperation of the shop floor in order to fulfil their own work roles.

Those supervisors describing themselves as members of the middle, or supervisory work group reported that they acted as a "buffer" between management and workers, sometimes "leaning" towards one group, sometimes the other. These supervisors referred to the "need to be seen as fair" and that supervisors have to "judge" the merit of a case and not automatically assume loyalty to one group or another over a controversial issue.

The results of both pilot and main study indicate evidence to support the Nealey and Fiedler suggestion that a large gap does exist between management and supervisory groups, at least from the viewpoint of the supervisor. Less support was apparent for the element of the "man in the middle" thesis which refers to the organisational position of the supervisor. On average, over the main and pilot study samples, only about one fifth of all supervisors felt associated with, members of, or had allegiance to, the supervisory work group.

5.5.3 Recruitment, Selection, Training and Development of Supervisors

As with the pilot study, discussion of the above issues was seen as comprising one interview subject area due to the fact that supervisors often discussed one of the four issues with reference to the others. These four

issues were included in interviews to assess the supervisors' attitudes towards the issues and determine the current organisational practises relevant to each issue. They have particular value because, in several organisations, managers referred to supervisory recruitment, training and development as "of paramount importance" and "central to the effectiveness of our manufacturing operation". Several managers described the recruitment and selection of "first-line managers" (i.e. supervisors) as an area where much managerial time and effort was expended.

Many supervisors' comments concerning the recruitment and selection of supervisors describe, as in the pilot study, experience on the shop floor as a pre-requisite for promotion to the position of supervisor. Again, the natural career progression route was from chargehand or leading hand to supervisor. A capacity for hard, physical work was one further criterion identified by supervisors in selecting potential supervisors.

The most popular responses to the question "If you were selecting a supervisor what sort of background experience would he have?" are shown in Table 32.

The main differences between the responses shown in Table 32 and those relevant to the pilot study (Table 12) are the decreases in the frequency of response 2 and the increase in response 3. Fewer supervisors in the main study referred to experience as a chargehand or leading hand as a preferred background for potential supervisors. More supervisors in the main study, however, described a detailed knowledge of the plant and products as a necessary background criterion. The most often mentioned response was "experience of working on the shop floor" which is consistent with, although less than, the figure reported in the pilot study. This result may help to explain the negative attitudes many supervisors hold

TABLE 32 ANSWERS TO THE QUESTION "IF YOU WERE
SELECTING A SUPERVISOR WHAT SORT OF
BACKGROUND EXPERIENCE WOULD HE HAVE?"
(N = 127)

<u>RESPONSE</u>	<u>FREQUENCY OF RESPONSE (%)</u>
1. Experience of working on the shop floor.	68
2. Experience as a chargehand/ leading hand working on the shop floor.	24
3. Detailed knowledge of plant and products. Technical knowledge.	21
4. Experience of managing/ handling men.	9

towards the introduction of graduate and trainee managers, who have no practical experience of working on the shop floor into the position of supervisor in some organisations.

Reflecting the pattern of responses in the pilot study, supervisors identified experience with working with men on the shop floor as the most popular response to the question "what are the most important skills and abilities a person should have if he is to become a successful supervisor?". (Table 33)

The second-ranked response was a detailed knowledge of plant, products and processes in the manufacturing operation.

The supervisors in both studies have indicated, by their responses, the importance of shop floor experience in both selection of supervisors and their subsequent success in the role. The benefit to be derived from such experience is clearly not only the acquisition of technical knowledge, which is often identified as a separate issue. Supervisors refer to the insights that may be gained in "understanding workers" by experiencing working on the shop floor at first hand. One comment illustrates the insights that may be gained.

"You've got to work there yourself to know. It helps if you've been just a worker - you know how their minds work - what they think about - what they can get away with - how hard to push themselves - who they can get round. You get to see all the fiddles and tricks - that's what a supervisor needs to know - there's no other way - you have to work there". (C₁ D₁₅)

The final question presented to supervisors in this category referred to organisational practises concerning

TABLE 33 ANSWERS TO THE QUESTION "WHAT ARE THE
MOST IMPORTANT SKILLS AND ABILITIES A
PERSON SHOULD HAVE IF HE IS TO BECOME
A SUCCESSFUL SUPERVISOR?" (N = 127)

<u>RESPONSE</u>	<u>FREQUENCY OF RESPONSE (%)</u>
1. Good experience of working with men on the shop floor.	41
2. Detailed, in depth knowledge of products, processes and plant.	32
3. Ability to manage men. Achieve respect, be a good leader.	19
4. Ability to solve problems (e.g. breakdowns, labour problems, arguments).	15
5. Good at administration, figure-work, planning (e.g. ordering raw materials, labour).	10
6. Ability to "get on", be friendly, work with subordinates, peers and superiors.	7

selection, recruitment, training and development, and supervisors' attitudes towards them.

Recruitment and selection of supervisors follow predominantly traditional lines in that the leading hand or chargehand is often selected for supervisory posts when they become vacant. Trainee managers, their temporary occupation of the supervisory role, and the unfavourable attitudes many supervisors hold towards them, have already been discussed. The main study results of supervisors' responses to the subject of training were, as was the case of the pilot study results, clearly unfavourable. Many supervisors described training as a "waste of time", and "less than useless". A small minority (14%) felt that training was useful and appropriate. There was no noticeable difference between the groups of supervisors in the main study in considering discussion of attitudes to training. Supervisory development was discussed mainly in terms of career development and promotion. Most supervisors in the main study mirrored the views of supervisors in the pilot study. Over 68% of supervisors in the main study held unfavourable attitudes towards development of supervisors. One example reflects this attitude.

"There are only a few chances to get on for us (supervisors). Most of us stay where we are - I used to want to go up, not now though - I'm brownd off with it". (B₂ C₁₂)

27% of all supervisors held favourable or neutral attitudes towards development, many referring to their preference for their existing work role.

5.5.4 Communicating Relationship with Superior.

This aspect of the supervisor's work role was discussed in

order to determine the quality of the communicating relationship, as rated by each supervisor, which he experienced with his immediate superior. It was suggested earlier (see Chapter 2) that the quality of the communicating relationship between the supervisor and his immediate superior would affect the level of role ambiguity experienced by supervisors. That is, those supervisors who described their communicating relationship with their manager as poor would be more likely to suffer from a higher level of role ambiguity than those who enjoyed a high quality of communicating relationship.

It became apparent, on analysis of the interview data by company, that no clear pattern could be discerned regarding the above hypothesis and there were, perhaps not surprisingly, clear differences in the practise and perceived style of communication events between departments within each organisation. Some illustrative comments reflecting the attitudes of supervisors are described below.

"If I see the manager once a day that's lucky - he's not often on the floor....he leaves me notes in the office - what good is that?" (A4 B₁₁)

"We get a weekly meeting with the manager and talk about last week - any problems come out - it makes a difference when people sit down and listen to each other". (B₂ F₀₃)

Whilst attitudes to different communication practises were mixed; most supervisors saw the communication events which occurred with their superiors in unfavourable terms. The answers to the questions "How would you describe the way you and your immediate boss communicate?" summarised in Table 34, reflects supervisors attitudes to communication with the superior, the response categories 3,4 and 5 being associated with negative attitudes of respondents.

TABLE 34 ANSWERS TO THE QUESTION "HOW WOULD YOU
DESCRIBE THE WAY IN WHICH YOU AND YOUR
IMMEDIATE BOSS COMMUNICATE?" (N = 127)

<u>RESPONSE</u>	<u>FREQUENCY OF RESPONSE (%)</u>
1. Good, very satisfactory, useful, effective.	19%
2. Adequate, O.K. no problems, it works.	26%
3. Not very useful, not very often, there are problems with communication.	34%
4. Poor, very bad, useless, awful	11%
5. We don't, none, there isn't any.	4%

TABLE 35 ANSWERS TO THE QUESTION "DO YOU FEEL THE
INFORMATION YOU RECEIVE FROM YOUR BOSS IS
TIMELY, TRUSTWORTHY, USEFUL, ADEQUATE?"
(N = 127)

<u>RESPONSE</u>	<u>FREQUENCY OF RESPONSE (%)</u>	
1. Useful (Yes/No)	28 (Yes)*	67 (No)*
2. Adequate (Yes/No)	41 (Yes)	57 (No)
3. Timely (Yes/No)	21 (Yes)	76 (No).
4. Trustworthy (Yes/No)	9 (Yes)	89 (No)
(* Remaining individuals (i.e. 5%) were unsure, did not know or felt sometimes Yes/sometimes No)		

Whilst no clear pattern of communication events involving supervisors and their superiors emerged, supervisors' attitudes towards formal, regular communication activities tended to be more favourable than attitudes towards informal, infrequent communication.

Some managers held regular, formal communication meetings with supervisors (once per week, twice per month, or once per month) and informal daily discussions concerning such subjects as work targets, previous output, and labour planning. Others relied entirely on daily informal discussions with supervisors. Those supervisors who rated their communication with their manager as less than adequate (falling into the response categories 3, 4 or 5 of Table 34) often referred to a poor overall relationship (for example, a clash of personalities) with their manager.

Answers to the question "Do you feel the information you receive from your boss is timely, trustworthy, useful, adequate?" are presented in Table 35, and generally reflect the pattern of responses resulting from the pilot study interview data.

Table 35 provides additional evidence for the low rating supervisors express towards communication with their superiors. Whilst Table 34 indicates the mainly unfavourable attitudes of supervisors towards the overall process of communication with superior, Table 35 refers more closely to attitudes towards aspects of the content of communication, that is, the information which is communicated. Perhaps most disturbing from a management viewpoint is the rating of supervisors of the trustworthy nature of the information communicated to the supervisor. In both pilot study and main study the results show that a large majority of supervisors view the information they receive from their boss as not trustworthy. Many of the supervisors who answered "no" to the "trustworthy" question referred to

discussions with their peer group (supervisors) in order to confirm or refute information passed by managers.

In summarising the results of the main study and pilot study interview data, there is some clear support for the suggestion presented in Chapter 1 that the supervisor - superior communication relationship suffers from a considerable degree of inadequacy.

5.5.5 Sources of Job Satisfaction and Dissatisfaction

The above two subjects comprising the two themes of discussion during supervisory interviews were included in order to elicit attitudes towards them and supervisors' perceptions of sources of satisfaction and dissatisfaction in their jobs.

Again, as was the case in the pilot study, there was often a period of clarification of the issues being discussed before the supervisor responded to the two pre-planned questions:

1. "What do you feel are the major sources of job satisfaction for you in your job?"

and

2. "What do you feel are the major sources of job dissatisfaction for you in your job?"

Tables 36 and 37 show the answers of supervisors to the two questions presented above. The attitudes of supervisors towards the sources of job satisfaction and dissatisfaction were favourable and unfavourable respectively. This outcome was to be expected due to the construction of the question. Both questions require the respondent to identify current sources of job (dis) satisfaction which he feels exist in

TABLE 36 ANSWERS TO THE QUESTION "WHAT DO YOU FEEL
ARE THE MAJOR SOURCES OF JOB SATISFACTION
FOR YOU IN YOUR JOB?" (N = 127)

<u>RESPONSE</u>	<u>FREQUENCY OF RESPONSE (%)</u>
1. Achievement of departmental/section production tasks (achieving targets set by manager).	64
2. "Good" work atmosphere, "good" relationships with peers, subordinates and superiors. Mutual respect relationships.	57
3. Pay, salary, rewards of work, Praise, recognition.	41
4. Absence of problems on shift. No breakdowns, work interruptions, union/labour problems.	34
5. Working environment - hygiene, cleanliness, noise, space. Facilities at work place - social activities.	13

his job. If, however, the question required each supervisor to describe a list of 'ideal' sources of job satisfaction, which should exist in his job, then it is likely that attitudes within the category "source of job (dis)satisfaction" would vary considerably with the presence of each item.

With reference to responses to each question, the pilot and main study results show that more supervisors described source of job satisfaction than dissatisfaction, which reflects the levels of satisfaction reported by supervisors as, commonly, quite high.

Some typical comments which reflect the variety of responses are shown below:

"It's often the little things - the manager might say you're doing a good job - maybe not often but it's given me job satisfaction". (C₃ A05)

"For me it's getting on well with my manager and men - that's what job satisfaction's all about". (C₁ B16)

"Just give me a smooth shift with no down time - that's all I need". (D₂ C14)

With reference to the most popular sources of job satisfaction, the achievement of production tasks, one comment reflects the attitude of many supervisors:

"Getting the target for the day out and doing the job right - I think I feel satisfied then - I know I've done a good job. Quality, costs - all right, that's really satisfying". (A₂ C03)

The main difference between pilot and main study results on the issue of sources of job satisfaction, is the

increase in frequency of the responses concerning "absence of problems on shift", indicating the preference of over one third of all supervisors for a "quiet life", with relatively few problems which might interfere with the achievement of production tasks.

Table 37 presents the answers of supervisors to the question "What do you feel are the major sources of job dissatisfaction for you in your job?" As the results of both main and pilot study have indicated, the converse of some issues mentioned as sources of satisfaction are referred to by supervisors when describing sources of dissatisfaction. These issues are included in response categories 1, 2 and 3 in Table 36 (1, 3 and 5 in Table 37).

The common pattern of both pilot and main study results shows that the two most often mentioned subjects described as sources of job dissatisfaction for supervisors in their jobs are the non-achievement of departmental production tasks (and inhibitors of same, e.g. breakdowns) and working relationships with subordinates and superiors.

Examples of comments referring to these two subjects include:

"They are silly things - not enough racks, trays or buckets to get the job done - that's the sort of thing that throws out the whole production and really is the main thing".

(A₁ F₁₄)

"The most dissatisfying part of my job is my manager. We don't see eye to eye and are at each other's throats most of the time". (B₂ E₀₉)

The final response category 6, in Table 37 reflects a similar proportion of supervisory responses associated with the clarity of role expectations of supervisors. The subject concerns the degree of clarity, perceived by

TABLE 37 ANSWERS TO THE QUESTION "WHAT DO YOU FEEL
ARE THE MAJOR SOURCES OF JOB
DISSATISFACTION FOR YOU IN YOUR JOB?"
(N = 127)

<u>RESPONSE</u>	<u>FREQUENCY OF RESPONSE (%)</u>
1. Non-achievement of departmental/section production tasks.	46
2. Relationships with subordinates and superiors.	29
3. Lack of clarity of role expectations.	25
4. Attitudes/style of others. Lack of work interest shown by subordinates. Lack of cooperation between sections.	21
5. Rewards of work. Pay, salary.	17
6. Lack of challenge and variety in work tasks.	7

supervisors about their role expectations. For example, when supervisors referred to their uncertainty concerning how their performance was evaluated, or what managers expected of supervisors in terms of performance, then this response was categorised as "lack of clarity of role expectations". This category clearly has a close association with the concept, role ambiguity, and suggests that the presence of role ambiguity may be related to job dissatisfaction.

5.5.6 Work Motivation

In discussion of the work motivation of supervisors with supervisors in the pilot and main study, it was apparent from responses to questions about motivation that their concepts of work motivation included both job interest and feelings of involvement in work. Whilst this section of the interview was mainly concerned with determining the level of motivation of the subject and the factors that influenced that level, the issues of job interest and involvement in work were discussed in depth when subjects found them relevant.

The author described his ideas to supervisors concerning work motivation in terms of the "desire to expend effort in the performance of work tasks" and focussed the attention of the interviewee upon this definition when discussing motivation.

The influencing role of job satisfaction and interpersonal relationships are two factors in the pilot study which appear to have been mirrored in the main study. The main difference between the two sets of results is the position of interpersonal relationships in the rank of frequency of response of supervisors (see Table 38). The value of interpersonal relationships for supervisors' motivation is

TABLE 38 ANSWERS TO THE QUESTION "WHAT SORT OF THINGS DO YOU THINK AFFECT
YOUR LEVEL OF MOTIVATION AT WORK?" (N = 127)

<u>RESPONSE</u>	<u>FREQUENCY OF RESPONSE (%)</u>	<u>ATTITUDE</u>
1. Interpersonal relationships with superiors and subordinates.	53	-21/7N/25+
2. Job satisfaction, effects of satisfaction.	27	-10/4N/13+
3. Organisational reward system (pay, rewards, non-financial rewards).	23	- 7/3N/13+
4. Personal pride in work, self-respect.	20	- 1/4N/15+
5. Job interest, variety of work tasks, challenge of work.	16	- 3/1N/12+

reflected in the remark below:

"I don't think I'd put any more effort into my work for more money - I would've for Mr..... (a retired manager) - he was a good bloke - the men would do it for him, not like today". (A2 D09)

One comment concerning differential financial rewards indicated the quite common view that organisational rewards did not discriminate between superior, average, and poor performance.

"I could put a lot more effort into it but what's the point? - you get no different money than the deadleg - nobody treats you any different - why should I - the men nor the manager don't - it's like the bloody Civil Service here". (B1 A05)

In contrast to the above comment, one supervisor's response is reproduced in part below and refers to the possible favourable aspects of his work which he suggests influences his level of motivation.

"I'm very motivated - I think it's down to a good boss, good men on the floor and I'm well paid too. I enjoy work which helps... it's different every day - that makes it interesting". (C1 C03)

Many supervisors' responses in the main study (68%) reflect the role played by interpersonal relationships in affecting individuals' motivation. In second place comes the subject of job satisfaction, individuals referring to the situation where, if they feel satisfied, they are subsequently more likely to put more effort into their work tasks. Almost as popular as the issue of job satisfaction was, as can be seen in Table 38, elements of the reward system and self respect, or pride in performing tasks successfully.

The final category (5) in Table 38 describes the frequency which supervisors responded with a comment about general job interest, the variety of work tasks, or the challenge provided by supervisory tasks. A difference between pilot and main study results not previously mentioned, is the appearance of category 5, in the main study results. In this category supervisors referred to the way characteristics of the supervisory job influenced work motivation.

The attitudes of supervisors associated with each category is shown in Table 38, indicating the very mixed attitudes (favourable and unfavourable) which supervisors hold towards the various subjects. Most favourable attitudes are associated with categories 4 and 5, which describe the supervisors' feelings of personal pride in their work and self-respect and several characteristics of the supervisory role, respectively.

Answers to the questions "How motivated do you feel in your job?" and "How much effort do you feel you put into your job (could you put more in?)" are similar to those received during the pilot study, which tend to confirm the observation by managers and management articles that supervisors commonly suffer from low levels of motivation. The responses to both questions are summarised together as the questions (and responses, as can be seen from Table 39) are closely associated.

The main study results differ most obviously from pilot study results concerning levels of motivation in respect of the proportion of supervisors who perceived their own levels of motivation as low. Over one third of all supervisors felt that they could apply much more effort to their work tasks, whilst the largest group of supervisors (39%) saw themselves as "moderately" motivated, describing "average" levels of motivation. If this data is linked

TABLE 39 ANSWERS TO THE QUESTION "HOW MOTIVATED DO YOU FEEL IN YOUR JOB?" AND ("HOW MUCH EFFORT DO YOU FEEL YOU PUT INTO YOUR JOB, COULD YOU PUT MORE IN?") (N = 127)

<u>RESPONSE</u>		<u>FREQUENCY OF RESPONSE (%)</u>	
			<u>Overlap a/b' (%)</u>
1 a.	High, very motivated	a. 21	17
b.	(High effort put into job) (No more input possible, could not put more in)	b. (27)	
2 a.	Medium, average, moderate amount, middle levels, reasonably motivated.	a. 39	26
b.	(Medium, normal amount of effort into work). (Could put more in, little more effort could be applied).	b. (28)*	
3 a.	Low levels, poor motivation, indifferent, apathetic, not interested in their work tasks.	a. 31	24
b.	(Low effort input, low levels of effort applied, could put much more effort into work).	b. (39)	
4 a.	"Turned off", de-motivated, despondent, not motivated at all.	a. 8	4
b.	(Minimal amount of effort put into work, only enough "to get by", could put a lot more effort into work tasks).	b. (4)	

(* Frequency of response to question in brackets ())

(' Overlap refers to the % of "a" respondents responding in category 'b'. For example, in 1, of the 21% of supervisors (27 individuals) responding in this category, 17% (21) felt that they put high effort into the job, or the maximum possible).

with the results shown in Table 38 in an attempt to identify factors which may be responsible for the lower levels of motivation described in Table 39, the response categories to which supervisors have associated most negative or unfavourable attitudes seem most obvious choices. These are, in Table 38, categories 1, 2 and 3, which are: Interpersonal relationships with superiors and subordinates, job satisfaction and the effects thereof, and the organisational reward system.

5.5.7 Relationships with Subordinates

Supervisors were asked to respond to questions concerning their relationships with subordinates as it has been suggested (Chapter 1) that, in addition to his relationship with his manager, a supervisor's relationship with his subordinates may be a significant element in determining supervisory attitudes and behaviour. This seems a particularly relevant issue in the light of data presented previously concerning the observation that supervisors may often view their own work performance as closely associated to that of the production department. Section 5.5.6 also presents some data which indicates that the supervisor's interpersonal relationships influence perceived levels of motivation.

Many of the supervisors in the study often have not only considerable experience of working on the shop floor, but some also described non-work links with the subordinate work groups through domestic relationships, common educational experiences, or common friends.

The main theme of these discussions were centred around the supervisors' perceptions of their relationships with subordinates who report directly to them.

The results of the pilot study and the main study both present a similar pattern of responses to the question posed to supervisors "How would you describe your relationship with your subordinates?" (See Table 20 - pilot study, Table 40 - main study). In both sets of results, approximately one half of all supervisors interviewed described their relationships with their subordinates as close, friendly or closely associated which is consistent with supervisors' responses to questions regarding orientation and group membership.

Aside from the relationships that may have been established between supervisors and their subordinates through the "non-work links" described above, comments from supervisors suggest that the supervisor-subordinate relationship is often encouraged by supervisors to promote the cooperation of the shop floor work group. The following comment refers to the cooperation required from the shop floor group:

"Your department's in their hands - if they want to they can make your life a misery - so you have to treat them right and they'll respect you - not soft, not too friendly...but with respect". (D₁ B₁₄)

In the main study a greater percentage of supervisors described their relationship with subordinates as friendly or close than in the pilot study.

In discussions concerning supervisors' relationships with subordinates it was apparent that the career transition for many supervisors from the position of leading hand or chargehand to that of supervisor had been at least uncomfortable and, at worst, a painful experience. Some supervisors regretted their decision to move into the supervisor's job as they had lost, for example, much social contact with their previous peer group.

TABLE 40 ANSWERS TO THE QUESTION "HOW WOULD YOU
DESCRIBE YOUR RELATIONSHIP WITH YOUR
SUBORDINATES?" (N = 127)

<u>RESPONSE</u>	<u>FREQUENCY OF RESPONSE (%)</u>
1. Very friendly, close workmates, one of mutual respect.	67
2. Good working relationship, not friendly, "firm but fair".	24
3. Not very friendly with shop floor work group. Seen by shop floor as part of supervisor or management group. Not close.	7

Several supervisors described their decision to move into supervision with some regret as they felt that they had lost, overall, more than they had gained through promotion to supervisor.

The largest group of supervisors, as in the pilot study, referred to the relationship between supervisor and subordinates as necessarily close because the cooperation of the subordinate work group was required to ensure the achievement of group production tasks. This group of supervisors commonly saw their relationship with subordinates as close, friendly or one of mutual respect. The next largest group comprised those supervisors who felt their relationship with subordinates was not close or friendly, but that they enjoyed a "good working relationship" and they were "firm but fair" with subordinates. The final, smallest group of supervisors were those who saw their subordinates as less than trustworthy and who were "out for all they can get". Supervisors in the group described their relationship with subordinates as one in which they felt they needed to demonstrate their authority. One comment reflects this view:

"You have to be firm with the men. I used to work there myself so I know the wrinkles - they are out for all they can get so you have to be one step ahead and let them know who's boss". (C₁ A09)

Considering the largest group of supervisors described above it is likely that, because the successful achievement of production tasks is apparently allied to supervisory job satisfaction, relationships with subordinates would be indirectly linked to job satisfaction (assuming that performance of production tasks is influenced by the relationship between supervisor and subordinate). This suggestion is consistent with

the results of analysis of supervisors' responses to the question concerning sources of job satisfaction.

5.5.8 Role Ambiguity

The discussion concerning the issue of role ambiguity centred on the experiences of supervisors in ambiguous work situations and their attitudes towards these experiences. The concept of role ambiguity was described by the author to supervisors, illustrating the concept by examples of "grey" areas of management decision-making, ill-defined or unclear role requirements, and a general lack of clarity in aspects of supervisory work.

Reference to the subject of role ambiguity has been made in other structured parts of the supervisory interviews. For example, during discussions of sources of job satisfaction some supervisors referred to their own performance and how they were uncertain about how they were assessed by managers. Supervisors were unsure as to whether they were assessed purely upon departmental production performance or if there were other criteria managers applied to evaluate supervisory performance.

In discussing group membership and orientation of supervisors, many supervisors mentioned the position in which they felt closely aligned towards the shop floor work group yet received encouragement from managers to feel part of the management team, which may be responsible for some ambiguity experienced by supervisors. This situation has been identified not only in the main study interview data, but also in the pilot study.

Other situations described by supervisors as ambiguous, or which lacked clarity, included mainly the relationship supervisors should encourage with their subordinates, the

TABLE 41 ANSWERS TO THE QUESTION "CAN YOU DESCRIBE SITUATIONS OR
AREAS OF YOUR JOB WHERE YOU FEEL UNCERTAIN OR UNCLEAR?"
(N = 127)

<u>RESPONSE</u>	<u>FREQUENCY OF RESPONSE (%)</u>	<u>ATTITUDE</u>
1. Physical involvement in production process.	46	-32/5N/9+
2. Criteria for effective supervisory performance.	36	-34/2N
3. Relationship with subordinates, orientation and group membership.	25	-21/4+
4. Levels and limits of supervisory authority.	23	-18/5+

level of physical involvement in the production process, the criteria for effective supervisory performance, group membership or orientation of supervisors and limits of authority of supervisors.

The difference between pilot and main study results in this section show that in the main study no reference was made to the management of the relationship between shop floor work group, management and employee representatives, which represented a minor response category in Table 21.

The attitudes of supervisors towards the four categories presented in Table 41 were mainly unfavourable. However, a small minority of supervisors felt some of the situations of uncertainty they described were favourable.

The subject of physical involvement in the production process was seen by some supervisors as ambiguous in that supervisors are often required to physically participate in working on the production line, yet are commonly discouraged by some managers. Supervisors and managers have clearly differing views on this subject which perhaps indicates the ambiguous nature of the subject.

5.5.9 The Status, Responsibility and Authority of Supervisors

These subjects were discussed in close association during the interviews with supervisors, and have been grouped together in the presentation of the results. The discussion focussed upon the supervisors' perceptions of changes in supervisory status, responsibility and authority during the period of supervisors' work experience and attitudes towards these subjects. All three issues have been previously mentioned as major changes in the supervisory work situation as described in

Section 5.5.1. Table 42 summarises the responses of supervisors to the questions concerning status, authority and responsibility and also their attitudes towards these subjects.

Summarising the response of supervisors to the pre-planned questions the following statements can be made. Most supervisors refer to their status as having deteriorated over their work experience. Many supervisors determined their status in terms of the respect they felt they were shown by subordinates and superiors, and, overall, supervisors saw the reduction in their status as unfavourable. Some supervisors referred to the change in the power of the shop steward as an explanation of the apparent deterioration in supervisory status. In addition, both responsibility and authority were seen by supervisors to have been reduced over the work experience of many supervisors. The reduction in authority was seen in mainly negative terms whilst in the case of responsibility, this was seen as largely favourable. Supervisors felt that often their authority did not match their responsibilities. Whilst service departments (e.g. Quality Control, Production Planning) may have reduced the amount and variety of work for which the supervisor was previously responsible, legislation, new technology and faster plant processes are seen to have increased the burden of responsibility for the supervisor.

As mentioned elsewhere, the final stages of the supervisors' interviews were devoted to the discussion of any subjects supervisors felt were important issues to them in their jobs, or anything concerning supervision in the organisation that interviewees felt were relevant and important and which had not been discussed. The time available for these discussions was invariably short (15-30 minutes) but many supervisors in the main study (64%) raised issues of relevance not only to the previous

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TABLE 42 WHAT/HOW MUCH STATUS/AUTHORITY/RESPONSIBILITY DO YOU HAVE IN YOUR JOB?
HOW DO YOU FEEL ABOUT IT? (N = 127)

RESPONSE	RESPONSE FREQUENCY (%)		Authority	<div><div></div></div> To Authority	Status	<div><div></div></div> To Status	Respons- ibility	<div><div></div></div> To Respons- ibility
	ATTITUDE (+/N/-)*							
1. A lot, very much, a great deal.	5		+4/1-	9	+8/1N	14	+3/5N/6-	
2. Quite a lot, a fair amount.	21		+16/5-	12	+8/4N	17	+7/2N/8-	
3. Not much, about average, more than a little.	26		+10/7N/9-	19	+15/1N/3-	38	+24/7N/7-	
4. Only a little, a small amount.	34		+4/2N/27-	56	+3/6N/46-	22	+15/6N/1-	
5. Hardly any, very little, almost none.	13		2N/11-	3	3-	8	+4/1N/3-	

*
+ = favourable attitude
N = neutral attitude
- = unfavourable attitude.

subject categories, but also those outside the scope of this study. For example, several supervisors were concerned with career development and introduced discussions concerning personal career routes. Others were more concerned with the current economic climate, unemployment, market conditions. and company profitability. As was the experience in the pilot study, several supervisors were concerned with the impact of new technology at work with particular reference to computers and automation in the production process.

5.6. Interviews with Managers: Results of Content Analysis

A total of 41 managers from the six participating organisations were interviewed, following the same interview process as that employed in the initial stages of the supervisory interviews. The main subjects for discussion were different from those discussed during supervisors' interviews and are described below.

- (i) The manager's style of management, referring specifically to the management of supervisors.
- (ii) His criteria for effective supervision.
- (iii) His perceptions of the supervisor's role in the organisation, identifying the most important elements in the supervisor's role.

5.6.1 Management Style

This topic was discussed with reference to the way in which the manager managed his supervisors and how he described his relationship with them. The results of an analysis

TABLE 43

ANSWERS TO THE QUESTION "HOW WOULD
YOU DESCRIBE YOUR MANAGEMENT STYLE?"
(N = 41)

<u>RESPONSE</u>	<u>FREQUENCY OF RESPONSE (%)</u>
1. Dependent upon individual supervisor and situation, flexible, variable style.	43
2. Participative, consultative, democratic, involving supervisors in decision-making.	36
3. Formal superior-subordinate, disciplined.	12
4. Low/No trust, close supervision, authoritarian.	8

TABLE 44

HOW WOULD YOU DESCRIBE YOUR
RELATIONSHIP(S) WITH YOUR
SUPERVISOR(S) (N = 41)

<u>RESPONSE</u>	<u>FREQUENCY OF RESPONSE (%)</u>
1. Friendly, cooperative, close, good relationship, supportive.	71
2. Formal, manager-subordinate relationship.	20
3. Poor, conflict relationship. Personality clashes between boss and supervisor. Not good, less than adequate..	7

of answers to the question, "How would you describe your management style" is reported in Table 43 and reflect, largely, the pattern which emerged from the pilot study results. The majority of responses indicated that managers saw their style as dependent upon the individual supervisor and the situation, suggest the manager employed a variety of styles in their contact with supervisors.

The main study results indicate a greater proportion of (Category 2) democratic-style managers than that in the pilot study, with a commensurate reduction in the flexible-style manager (Category 1).

The style of managers, as described by managers, is reflected in the pattern of relationships managers perceive with their supervisors. Table 44 shows the managers' answers to the question "How would you describe your relationship with your supervisor?", and shows that a majority of managers see their relationship with their supervisors as friendly and cooperative. This result contrasts with the results of earlier analysis (5.5.4) which suggests that almost half of all supervisors in the main study rate their relationship with their immediate superior as less than adequate.

5.6.2 Criteria for Effective Supervision

This section concerns the managers' perceptions of the personal characteristics of an "effective supervisor". The manager was asked to describe what he felt were the main elements that comprise an effective supervisor. These elements are presented in Table 45 which shows the answers to the question "What do you feel are the most important characteristics of a successful supervisor?". Four elements identified by managers represent the majority

TABLE 45 ANSWERS TO THE QUESTION "WHAT ARE THE
MOST IMPORTANT CHARACTERISTICS OF A
SUCCESSFUL SUPERVISOR (N = 41)

<u>RESPONSE</u>	<u>FREQUENCY OF RESPONSE (%)</u>
1. In-depth knowledge of plant and processes.	54
2. No such thing/Don't know	31
3. An ability to gain respect of both subordinates and superiors.	24
4. Skill in managing men (communicating/leading/ motivating).	18
5. An ability to solve problems and a willingness to learn.	16

of managers' responses. The remaining group comprised those managers who did not believe "effective supervision" was a realistic concept (some managers suggested that this was something which they had not previously experienced) and "don't knows".

Others who fell within this final category (5, Table 45) were managers who felt he was no different from "other workers", that there was no "recipe" for effectiveness, and those who believed that effective supervisors were "just good workers doing a good job".

The main study results differ from those of the pilot study in managers' responses to the question concerning important supervisory characteristics. No Category 5-type responses were apparent in the pilot study, whilst almost one-third of managers gave responses which fall into this category. This may be explained by managers' poor overall ratings of supervisors' performance in the main study sample, many managers commonly describing their supervisors' performance as "inadequate" and "poor".

5.6.3 Managers' Perceptions of the Supervisory Role

The final subject discussed with managers was their perceptions of what were the important components of the supervisory role, focusing upon the most important in each organisational context. A similar exercise, identifying the important task elements of the supervisor's role, will take place (in Section 5.7.2) later when the Task Rating Form is analysed. The Task Rating Form contains 34 items describing what are thought to be common task elements of a supervisor's job, and both supervisor and his immediate superior completed the form by indicating the importance of each element in the supervisory role.

TABLE 46 ANSWERS TO THE QUESTION "WHAT DO YOU
FEEL ARE THE MAJOR TASKS OF A SUPERVISOR
IN THIS ORGANISATION?" (N = 41)

<u>RESPONSE</u>	<u>FREQUENCY OF RESPONSE (%)</u>
1. Ensure production targets are achieved through shop floor work group management.	48
2. Modifying/Changing plant and machinery, reorganising production lines.	31
3. Manage breakdowns, absenteeism and other unexpected interruptions in the production process.	28
4. Set a good example for other workers by showing hard work, good time keeping etc. Act as model for subordinates.	4

The interviews with managers in the main study generated data concerning the main supervisory tasks which were consistent with that emerging from the pilot study, the most important popular response being the achievement of production tasks. The other, less popular responses both referred, albeit indirectly, to the successful completion of production targets, reflecting the importance of this issue from the viewpoint of managers. The value of this issue is further enhanced by the central role played by the "achievement of production tasks" as a major source of job satisfaction for supervisors.

Table 46 represents the responses of managers to the question "What do you feel are the major tasks of a production supervisor in this organisation?". One comment from a manager encapsulates many other managers' perceptions.

*"He must get the production out first and foremost.
Organise the men, and check the plant - he has to sort
out breakdowns and monitor quality....and keep his costs
down". (F₁ M₀₉)*

5.7 Results of the Analysis of Questionnaire Data

The questionnaire data from the 67 total data sets available from the main study were analysed and the results are presented in the following sections.

The Supervisory Questionnaire, comprising six sections corresponding to the six main variables (see Appendix 1), was coded and the data transferred to a computer data file for ease of computation. All the variables have been computed as simple summations (see Figure 11) of the relevant item scores except the variable which results from the data provided by Section 4 of the Supervisory

Questionnaire (Task Rating Form), and the Manager's Questionnaire. Here, the variable "Discrepancy of Role Perceptions" (DROLPER) has been calculated by summing the absolute differences between corresponding items in the Supervisory and Manager's Questionnaire. That is, the difference between a supervisor's and a manager's scores on item 1 are added to the difference (ignoring signs) between the supervisor's item 2 score and the manager's item 2 score, and so on up to item 34. The overall discrepancy score achieved by summing the absolute differences is used as a measure of disagreement between supervisors and managers concerning their respective ranking of the importance of task elements of the supervisory role.

Once the main study questionnaire data ($N = 67$) was transferred to the data file in the computer, The SPSS package previously described was employed as a useful and convenient vehicle for data analysis. An SPSS program was written by the author and provided the basis for the subsequent statistical analysis of the questionnaire data using standard SPSS programs.

The first task was to perform a basic test to ensure there were no missing data and that the data were in a satisfactory format. Simple frequency distribution tables were produced which, on examination, ensured there were no missing data and that the program was operating effectively. In addition, the validity of the data was checked to determine that it had been coded and input correctly.

Some descriptive statistics have already been presented (Table 28) which resulted from the preliminary analysis of main study questionnaire data.

The next stage in the analysis was to decide upon an appropriate statistical method or technique to indicate the relationship between the variables measured in the

questionnaires. The technique thought to be most relevant was Spearman's Rank-Order Correlation analysis. The correlation coefficient resulting from this technique indicates the degree to which variation in one variable is related to variation in another, so the level of association between two variables may be determined. Spearman's correlation coefficient, called Spearman's "rho" (r_s) is a measure of non-parametric correlation in that no assumptions have been made concerning the distribution of cases on the variables. The statistic itself (r_s) does require that both variables are measured on, at least, an ordinal scale. However, no assumptions are made about the distribution of cases on the variables.

The usefulness of the Spearman statistic lies in the fact that it is a summary measure, summarising the strength of a relationship between two variables. A test of the significance of the correlation was performed in each case, the same steps being followed in this test of significance as was in that previously described for testing the hypothesis that supervisors' scores of ambiguity were significantly higher than those of a group of managers. Here, the Null Hypothesis (H_0), was that the two variables in each case were unrelated in the population, whilst the Alternative Hypothesis (H_1) was that they were related in the population. The level of significance which has been previously set and discussed is the .05 level. The correlation matrix resulting from correlation analysis of the main study data is presented in Table 47. A summary of the significant correlations is shown in Table 48 and describes those relationships which are significant at the .05 level or less.

The associations identified in Table 48 suggest the following relationships between variable pairs. Variable pair 1 concerns the association between the supervisor and his superior (as rated by the supervisor) and the

TABLE 47 SPEARMAN-RANK CORRELATION COEFFICIENTS FOR THE VARIABLES JOB MOTIVATION, JOB SATISFACTION
ACCURACY OF ROLE PERCEPTIONS, NEED FOR CLARITY, ROLE AMBIGUITY, QUALITY OF COMMUNICATION,
-RELATIONSHIP (SUPERVISOR-MANAGER), RELATIONSHIP WITH BOSS, NUMBER OF YEARS AS FOREMAN AND
NUMBER OF SUBORDINATES

	1	2	3	4	5	6	7	8	9
1. NOSUBS	1.00								
2. YRSFMAN	0.03	1.00							
3. RELNBOSS	0.02	-0.14	1.00						
4. QUALCOM	-0.01	-0.02	0.56***	1.00					
5. ROLAMB	0.05	0.07	-0.27*	-0.26*	1.00				
6. NCLARITY	-0.03	-0.01	0.01	-0.17	-0.06	1.00			
7. DROLPER	0.08	-0.09	0.08	0.11	0.00	-0.13	1.00		
8. JOBSAT	-0.04	-0.14	0.14	0.13	-0.31**	-0.20*	-0.01	1.00	
9. JOBMOT	-0.13	-0.26*	0.22*	0.20*	-0.29**	-0.23*	0.08	0.37***	1.00

¹ (Longhand version of variables)
(described in Figure 11)

(* Significant at .05 level)
(** Significant at .01 level)
(*** Significant at .001 level)

Key Table: ² p at .05, N = 67, r = 0.202
 p at .01, N = 67, r = 0.284
 p at .001, N = 67, r = 0.371

² (Values calculated using formula in Siegel (1956) p. 212)

(If r_s in the matrix above exceeds the key table value of r_s a significant correlation has been established at the specified level.)

TABLE 48 SUMMARY OF RELATIONSHIPS BETWEEN VARIABLES WITH CORRELATION COEFFICIENT
SIGNIFICANT AT .05 LEVEL OR LESS (N = 67)

	VARIABLE PAIR	r_s	LEVEL OF SIGNIFICANCE OF r_s
1.	Qualcom and Relnboss	0.56	.001
2.	Rolamb and Relnboss	-0.27	.05
3.	Jobsat and Rolamb	-0.31	.01
4.	Jobsat and NClarity	-0.20	.05
5.	Jobmot and Yrsfman	-0.26	.05
6.	Jobmot and Relnboss	0.22	.05
7.	Jobmot and Qualcom	0.20	.05
8.	Jobmot and NClarity	-0.23	.05
9.	Jobmot and Jobsat	0.37	.001
10.	Jobmot and Rolamb	-0.29	.01
11.	Rolamb and Qualcom	-0.26	.05

quality of the overall relationship between supervisor and boss (again, as rated by the supervisor). This association between variables is positive and significant at the .001 level of significance and suggests that those supervisors who rate the quality of their communicating relationship with their boss highly (lowly), also rate their overall relationship with their boss as high (low), or in terms of the scale response, good (bad). This relationship is supported by the results of the interview data analysis, indicating those individual supervisors who see their communicating relationship with their boss as poor often also rate their overall relationship with their boss as less than adequate. This situation is intuitively acceptable in that if a supervisor does not have a "good", (rated in his terms) relationship with his boss, it seems probable that their communicating relationships would not be particularly effective (as seen by the supervisor). The supervisor may even attempt to avoid communicating face to face with his superior as a result of their poor relationship.

The second variable pair indicates a negative and significant relationship, at the .05 level, between role ambiguity and the supervisor's rating of his overall relationship with his immediate superior (role ambiguity refers to the level of role ambiguity experienced by supervisors). This relationship infers that the "better" the relationship between the supervisor and his boss (as rated by the supervisor) the lower the level of role ambiguity experienced by the supervisor, and vice versa. This result is consistent with the suggestion previously made that the overall relationship between supervisor and boss influences their quality of communicating relationship which, in turn, is thought to influence the level of role ambiguity experienced by the supervisor.

The association between job satisfaction and role ambiguity is negative and significant at the .01 level. This result can be interpreted as the higher the level of role ambiguity experienced by the supervisor, the lower his job satisfaction will be. The result is consistent with the negative or unfavourable attitudes generated by the presence of role ambiguity which was evident in the main study interview data. Variable pair 4, job satisfaction and need for clarity are related with a correlation of 0.20 which is low but significant at the .05 level. This relationship indicates that the higher (lower) the individual supervisor's need for clarity, the higher (lower) will be his job satisfaction.

The fifth variable pair shows a significant and negative correlation at the .05 level. This indicates that the longer a supervisor's work experience, the lower his job motivation score will tend to be. The longer a supervisor remains in his job therefore, the lower his motivation in his job. Whilst this relationship has no support from the data generated during the main study interviews, the author felt that the longer serving supervisors were less energetic and enthusiastic about their work than their younger colleagues.

The significance of the relationship between variable pair 6 is at the .05 level, the relationship being positive. This suggests that the higher a supervisor's rating of his overall relationship with his boss, the higher will be his job motivation. Variable pair 7 have a correlation which is positive and significant at the .05 level, inferring that the higher (lower) the rating of the communicating relationship between supervisor and boss, (rated by the supervisor) the higher (lower) the likely level of job motivation of the supervisor.

The relationship between job motivation and job satisfaction is positive and significant at the .001 level, showing that the lower (higher) the level of job motivation of the supervisor, the lower (higher) his job satisfaction. The strength of the relationship between job satisfaction and job motivation is reinforced by the results of interview data analysis which indicates that supervisors see job satisfaction as a determinant of job motivation.

There is a negative relationship between job motivation and role ambiguity ($r_s = -0.29$) which is significant at the .01 level. This suggests that those supervisors who experience high (low) levels of role ambiguity tend to score lower (higher) on the motivation scale, than those individuals with low (high) levels of experienced role ambiguity.

The final variable pair, the quality of communicating relationship between supervisor and boss and role ambiguity, show a correlation coefficient of 0.26 which is significant at the .05 level. This supports the view that supervisors with "good" ("bad") communicating relationships with their superiors (rated by supervisors) experience less (more) ambiguity than those with "bad" ("good") communicating relationships with their bosses.

5.7.1 Evidence Supporting or Refuting the Hypotheses

The hypothesis described in Section 2.2 and reproduced below are examined with reference to the evidence arising from the analysis of the main study data. The research hypotheses under examination are:

1. The existence of role ambiguity is a commonly occurring characteristic of the production supervisor's role.

2. Role ambiguity has a significant influence upon the work motivation of the production supervisor.
3. Role ambiguity is negatively related to the work motivation of the supervisor.
4. The effect of role ambiguity upon job motivation is mediated by the individual supervisor's need for clarity.
5. The quality of the communicating relationship between the supervisor and his immediate superior is negatively related to the degree of role ambiguity experienced by the supervisor.
6. Role ambiguity is negatively related to the job satisfaction of the supervisors in the study.

Both interview and questionnaire data are examined in the identification of supportive or non-supportive evidence for the hypotheses.

With reference to Hypothesis 1, the interview data suggests that over 60% of all supervisors in the main study referred to an aspect of the supervisory work system which supervisors found ambiguous. The Mann-Whitney U-test was applied to the mean scores of supervisors on the ambiguity scale and another mean (in this case arbitrary), the mid-point of the ambiguity scale. This test was performed to establish whether any significant difference existed between the two scores and the direction of any difference. The result of this test (Siegel p.155) shows that ($Z = 1.97$) there is a significant difference between the two mean scores at the .05 level and that the mean scores of supervisors on the ambiguity scale is significantly higher than the arbitrary 'mid-point' mean. As other researchers using the House and Rizzo role ambiguity scale have seldom

reported mean and standard deviation values, it is difficult to make comparative statements. However, there does appear to be some support for Hypothesis 1 from both interview and questionnaire data.

The strength of the relationship between role ambiguity and job motivation is indicated by the correlation coefficient ($r_s = -0.29$) which is significant at the .01 level of significance. Although a modest correlation, the result supports Hypothesis 2 and Hypothesis 3 in its direction and level of statistical significance. Data from interviews show no substantial support for the suggestion that role ambiguity influences motivation directly. It does however, show that uncertainty and lack of role clarity do produce a generally unfavourable attitude towards work, which is reflected in the sources of job dissatisfaction identified by supervisors and the unfavourable responses associated with role ambiguity. Levels of motivation, reported by supervisors themselves, indicate that most supervisors are, at least, moderately motivated in their work.

Results of the interview data analysis suggest that negative or unfavourable attitudes are associated with the presence of role ambiguity. The results of correlation analysis indicate some support for the third hypothesis, (role ambiguity is negatively related to work motivation), in that the sign of the correlation coefficient is negative and the coefficient is significant at the .01 level.

Evidence relevant to Hypothesis 4 emerges from the result of partial-correlation analysis performed on the questionnaire data. This method is designed to identify a "single measure of association describing the relationship between two variables (role ambiguity and motivation) whilst adjusting for one or more additional variables (need for clarity)", (Marascuilo and McSweeney, 1977).

In this case the partial correlation analysis allows the effect of the control variable to be removed. That is to say, in the current study, the independent, dependent and control variables may be thought of as role ambiguity, job motivation and need for clarity, respectively. It was hypothesised that, given a relatively high level of role ambiguity experienced by subjects, then the individual's need for clarity would moderate the negative effect which role ambiguity was suggested to exert upon job motivation. Those individuals with high scores on the need for clarity scale being more strongly influenced (in terms of the effect upon their motivation) than those with low scores. The result of the partial correlation analysis shows that there is no significant effect when the control variable is removed. Hypothesis 4 is, therefore, not supported from the evidence derived from the analysis of questionnaire data. As mentioned above, evidence exists to suggest that some supervisors hold unfavourable attitudes towards situations described as ambiguous or lacking clarity. This may indicate that an unsatisfied need for role clarity (i.e. high scores on the need for clarity scale) could be acting as a source of frustration for supervisors and may effect job motivation and other work attitudes. There is some support for this suggestion in the correlations between need for clarity and job satisfaction and job motivation ($r_s = -0.20, -0.23$ respectively) which are modest yet significant at the .05 level.

Hypothesis 5 concerns the relationship between the quality of communicating relationship between the supervisor and his immediate superior and the level of role ambiguity experienced by supervisors. The hypothesis is supported by the results of correlation analysis which indicate a negative and significant relationship (at .05 level). The outcomes of interview data analysis show that some of the sources of role ambiguity for supervisors may be a

result of the quality of the communicating relationship between the supervisor and his boss, assuming that a direct link exists between "quality" as used in this context and "effectiveness". Indeed it seems reasonable to suggest that uncertainties and ambiguities concerning the supervisory role are more likely to be removed or reduced if there is an effective communicating relationship between supervisor and boss.

The final Hypothesis describes the possible negative relationship between role ambiguity and job satisfaction. The presence and level of role ambiguity, as presented previously (Section 2.2) is suggested to have a negative effect upon work attitudes generally, and specifically job motivation and job satisfaction. Results by correlation analysis present a reasonable correlation coefficient between role ambiguity and job satisfaction ($r_s = -0.31$), which is negative and significant at the .005 level of significance. This relationship supports the statement that the higher (lower) the level of role ambiguity experienced by the supervisor, the lower (higher) the job satisfaction. Some evidence from interviews tend to confirm the negative influence of role ambiguity upon job satisfaction. Supervisors identified lack of role clarity as one source of job dissatisfaction, and associated mainly negative unfavourable attitudes towards situations of ambiguity and uncertainty in their work role.

5.7.2 Role Analysis.

Examination and analysis of Section 4 of the Supervisory Questionnaire (Task Rating Form - Appendix 1) and the Manager's Questionnaire (Appendix 2) have provided useful data concerning the level of agreement between managers and supervisors about the relative importance of various task elements in the supervisory role. In addition, the

questionnaire data have been employed to illustrate any difference which may exist between managers and supervisors concerning the important components of the supervisor's work role, that is, where the supervisor could best direct his work efforts to achieve successful task completion.

The 34 items described earlier comprised the 7 primary dimensions of the supervisor's job as defined by Dowell and Wexley (1978), which are:

1. Working with Subordinates (Items 1 - 7)
2. Organising Work of Subordinates (Items 8 - 12)
3. Work Planning and Scheduling (Items 13 - 15)
4. Maintaining Efficient/Quality Production (Items 16 - 20)
5. Maintaining Safe/Clean Working Areas (Items 21 - 24)
6. Maintaining Equipment and Machinery (Items 25 - 29)
7. Compiling Records and Reports. (Items 30 - 34)

An analysis of the scores of both supervisors and managers in the main study show that on average, on 18 out of 34 occasions supervisors and managers disagreed on the importance of a particular task element. This result is comparable to the results of the Boyd and Jensen study (1972) which showed a disagreement in, on average, 19 out of 39 cases.

The next stage of analysis of the role-relevant data described above was the ranking of items in order of importance, as rated by respondents (i.e. both manager and supervisor). The ratings by managers and supervisors are presented in Table 49, the rank position of each dimension calculated by taking the mean total scores on each

dimension, its magnitude determining its position in the ranking.

TABLE 49 RANKINGS OF TASK ELEMENTS (N = 67)

<u>Supervisor Rankings</u>	<u>Manager Rankings</u>
1. Working with subordinates.	1. Work Planning and Scheduling.
2. Organising work of Subordinates.	2. Maintaining Efficient/ Quality Production.
3. Maintaining Efficient/ Quality Production.	3. Organising Work of Subordinates.
4. Work Planning and Scheduling.	4. Working with Subordinates.
5. Maintaining Equipment and Machinery.	5. Maintaining Safe/Clean Work Areas.
6. Maintaining Safe/Clean Work Areas.	6. Maintaining Equipment and Machinery.
7. Compiling Records and Reports.	7. Compiling Records and Reports.

Probably the most significant difference exists between the two topmost rankings of each group in Table 49. Where supervisors rank as most important in their work roles the element of working with subordinates, managers commonly see work planning and scheduling as the supervisors' most important task.

Child and Partridge (1982) examined a more detailed list of supervisory tasks in their study and Table 49a shows the list of the top 7 elements ranked in terms of priority by production supervisors.

TABLE 49a SUPERVISORY TASK PRIORITIES (Taken from
Child and Partridge, 1982, p.107)

<u>Task/Activity</u>	<u>Ranked Priority</u>	<u>Nos. Highest Priority.¹</u>
Workload	1	28
Communicating with superiors	2	23
Quality	3	17
Recruits	4	13
Communicating with subordinates	5	12
Materials	5	12
Pace	7	9

¹ Numbers of supervisors giving that activity task the highest priority score.

The results of this study show some similarities when compared with the results of the Child and Partridge study. The first and third priority in the Child and Partridge study referring to the planning and allocating of workload, and the maintenance of quality. Both elements appear in Table 49 in slightly different guise. Ranking 3, in Table 49, compares well with the same ranking in Table 49a, and the Workload Task shown as first priority in Table 49a is closely allied to the second and fourth ranked items in Table 49 (Organising subordinates' work and planning/scheduling the production tasks). The most apparent difference between the results of this study and those of Child and Partridge is the priority placed against working with subordinates (or doing direct or operative-type work). In this study supervisors responded with reference to their current work activities and how much time they spent on each activity, as well as how important they felt each task element was in the supervisory role. So, whilst supervisors felt that working with subordinates was an important part of the array of tasks associated with the supervisory role, they also spent (according to comments made during interviews), a portion of their time performing this activity.

The second element in the ranking is seen by supervisors as

the organisation of their subordinates' work. The management group, on average, see the maintenance of efficient and quality production as more important than either organising subordinates' work or working with subordinates.

The questionnaire data in the form of the Managers' Questionnaire and the interview data generated from interviews with managers conflict with reference to the identification of the important task elements of the supervisor's role. Whilst Table 49 shows a measure of disagreement between supervisors' and managers' rankings of task elements, the perceptions of managers described in 5.6.3 suggest a close agreement between managers' and supervisors' perceptions of important elements in the supervisory work role.

Clear indications do exist for support of the statement that there is considerable disagreement and difference in perceptions between supervisors and managers on several issues including perceptions of supervisor-boss relationship and the criteria for effective supervisory performance.

5.8. Summary

This chapter has described the results of data analysis from the main study sample (N = 67), including both interview and questionnaire data. An analysis of data collection by participant organisations and a supervisory 'profile' of supervisors in the main study sample was presented. The 'typical' supervisor in the main study sample was 40 years of age, had spent over 5½ years as a supervisor, supervised 25 subordinates and had worked for over 5 years in his previous position before achieving supervisory status.

The main analytical techniques which have been applied to the main study data are content analysis (to the interview data), and to the questionnaire data, Spearman Rank Order Correlation analysis, multiple regression, the Kruskal-Wallis one-way analysis of variance, the Mann-Whitney U-Test, and reliability analysis.

The scale reliabilities for the questionnaire scales were determined and found to be all larger than 0.70 after the modification process of scale "purification" and lengthening had been carried out.

Major changes in the supervisory role and work system have been shown (Table 30) and the associated attitudes of supervisors towards changes are evaluated. Most often mentioned are changes in management personnel or changes resulting from managerial decisions and behaviour. Mainly negative or unfavourable attitudes are associated with these changes.

Support for all of the 5 statements made concerning the erosion of the supervisory role are evident from this section of the interview data. The increase in the power and status of shop floor trade unions and their representatives, the reduction in the differential between supervisors' and workers' pay, the introduction of "specialist" functional departments, the discrepancy between supervisory responsibility and authority, and the introduction of 'trainee' managers into the supervisory role, are all supported by evidence from supervisors' interviews and largely unfavourable attitudes are associated with them. Further interpretation of the results of interview data analysis is presented in the following chapter.

Analysis of the questionnaire data indicated that 11 relationships between the variables measured were

significant at the .05 level or better. Results of the Mann-Whitney U-Test and of the correlation analysis, combined with evidence emerging from the analysis of interview data, shows support for 5 of the 6 research hypotheses. Analysis of the Task Rating Form which comprises Section 4 of the Supervisory Questionnaire and the Manager's Questionnaire (Appendix 1 and 2, respectively) shows disagreement between managers and supervisors, on average, in 18 out of 34 occasions and differences between perceptions of most important task elements of the supervisor's role. However, conflicting evidence exists in the data derived from interviews with managers concerning perceptions of important supervisory work role elements (see 5.6.3).

Summary of Results of Chapter Five

A large majority (88%) of all supervisors in the main study had shop floor working experience. The level of unionisation of supervisors in the sample was similarly high (86%), most supervisors describing their decision to join a union as either a response to a specific event or incident in the organisation, a provision or form of employee protection, or to provide a negotiating agent on behalf of individual employees.

Supervisors saw the experience of working on the shop floor and a detailed knowledge of plant and products as the two most important qualifications for prospective supervisors. Again, in response to questions concerning the most important skills and abilities a supervisor should possess if he is to be successful as a supervisor, supervisors

identified shop floor experience and technical knowledge most often. Less commonly quoted were the abilities to "manage men", "solve problems", and be a "good administrator". The "experience of working on the shop floor" comment disguises the underlying benefit to be derived from such experience. This was described by supervisors as the insights which can be gained by "understanding workers".

Training has been described by most supervisors in the main study sample in largely negative terms. Particularly significant to supervisors appears to be the degree of appropriateness or applicability of training events. Supervisors express a desire to acquire relevant "tools" from the experience of training, which can be subsequently applied in the work situation and which will result in personal and organisational benefits. For example, many supervisors saw a direct and positive outcome from instruction in the technical aspects of new plant and machinery which were to be installed in the manufacturing process.

Supervisors' ratings of communicating relationships with superiors indicate that, from the supervisors perspective, the supervisor-superior communicating relationship is inadequate. In addition, most supervisors rated the information communicated by their superior as not timely, trustworthy, useful or adequate.

Major sources of job satisfaction are seen by supervisors as the achievement of departmental production tasks, 'good' relationships at work and a 'good' working atmosphere, organisational rewards (pay, praise, recognition), absence of production problems, and a good working environment. Dissatisfaction is experienced by supervisors due to the

non-achievement of departmental production tasks, the attitudes of other employees, the nature of supervisor-subordinate and supervisor-superior relationships, the lack of challenge and variety in supervisory work tasks, work rewards, and the lack of clarity of role expectations of the supervisor.

Most negative influences upon supervisors' motivation were described as interpersonal relationships with superiors and subordinates and the level of job satisfaction experienced by supervisors. On the positive side, supervisors viewed elements of the organisational reward system, personal pride and self-respect, and job interest, variety of tasks and work challenge as positive influences on supervisors' work motivation.

Supervisors expressed uncertainty concerning the criteria managers used for evaluating supervisory performance which may contribute to the level of ambiguity experienced by supervisors. Further sources of role ambiguity can be identified from the results of discussions concerning group orientation and membership where supervisors expressed feelings of membership to the shop floor work group yet were often encouraged by managers to see themselves as part of the management team. Other areas described by supervisors as ambiguous were their involvement in the production process and the levels and limits of supervisory authority.

(N.B. Some frequencies do not add up to 100% due to the inability of the author to classify/categorise response into any response category or are the result of "rounding up".)

CHAPTER SIX

SUMMARY OF FINDINGS OF THE MAIN STUDY

6.0 Introduction

This chapter summarises the findings of the main study presented in Chapter 5. The results of the analysis are interpreted and employed to evaluate the usefulness of the theoretical model (presented in Section 2.2). The predictive power of the model is not examined and no statements are made concerning causality. The main concern in this case is the assessment of the value of the model to explain different levels of job motivation and job satisfaction by the presence and level of role ambiguity as experienced by the production supervisor.

The evaluation of the theoretical model has been performed with the aid of the statistical technique, multiple regression analysis. The presentation of the technique of evaluation follows the summary of the findings of the main study which are presented below.

6.1 Summary of Results of Interview and Questionnaire Analysis

The major changes which have occurred in the supervisory role and work system of supervisors (mean experience of supervisor 5.6 years) have been divided into two broad categories. Firstly, those changes which refer to management personnel or resulting from managerial decisions and behaviour. Secondly, the changes which have not involved changes in management personnel or resulting from managerial decisions or behaviour. 64% of all supervisors

interviewed in the main study referred to the former category when describing major changes that had occurred during their work experience as supervisors. Examples of such changes are the introduction of new plant and machinery, new buildings, an increased product range, reduction in levels of supervisory authority, perceived levels of productivity, general plant efficiency, and levels of discipline. The remaining group (46% of the total sample) of supervisors, described major changes in the supervisory role and work system in terms not referring to the changes in management personnel or changes effected by managerial decisions or behaviour. Illustrative examples from this category include attitudes of the work force, industrial legislation, trade union power, and supervisors' responsibility. The data deriving from discussion of the above two categories tend to support the statements presented concerning erosion of the supervisory role presented in Section 5.5.1. For example, supervisors commonly perceive that some negative outcome has occurred as a result of item 1, "the increase in the power and status of shop floor Trade Unions". This perceived negative outcome may be freely translated to describe one element in the "erosion" of the supervisory role.

The reduction in differentials, the introduction of "specialist" departments, and the discrepancy between supervisory responsibility and authority are all recognised by many supervisors to contribute to a negative outcome in terms of the changes that have affected the supervisory role.

Discussions concerning the issues of orientation and group membership of the supervisor provided some data concerning the previously described "man in the middle" thesis. The subjects discussed the supervisors' attitudes towards their group membership and supervisors were asked to which group they felt allegiance, and to which group they felt more closely associated. A summary of the responses are shown in the following ranking.

TABLE 50 SUMMARY OF SUPERVISORS' RESPONSES TO QUESTIONS ABOUT GROUP MEMBERSHIP AND ORIENTATION (N = 127)

Question A: "To which work group do you feel most closely associated?"			
Question B: "Of which work group would you say you were a member?"			
Question C: "To which work group do you feel allegiance?"			
<u>RESPONSE</u>	<u>FREQUENCY OF RESPONSE (%)</u>		
	<u>A</u>	<u>B</u>	<u>C</u>
1. Shop floor work group.	71	59	54
2. Supervisory group/middle group between managers and workers.	19	23	38
3. Management group team.	4	3	1
4. No group/Don't know/Not sure/Company employee.	5	15	7

The results shown in Table 50 indicate little support for the "man in the middle" description of the supervisor with reference to the supervisor's perception of his organisational position. There is, at least in the case of supervisors comprising this study, a clear statement of membership of the supervisor to the shop floor work group. This interpretation would seem to be supported by the results of the supervisors' rankings of task elements (Table 49) where "working with subordinates" is seen by most

supervisors as the most important task element in the supervisory role.

Discussion during interviews with supervisors about the recruitment and training of supervisors, identified the supervisors' criteria for the selection of potential supervisors. The criteria were, in rank order of popularity:

1. Experience of working on the shop floor.
2. Experience of working as a chargehand/leading hand.
3. Detailed knowledge of plant and products.
4. Experience of managing men.

The most popular training experience chosen by many supervisors from the different types they had experienced was the one/two-day seminal model, presented either by internal company managers or outside consultants.

Whilst a majority of supervisors (68%) felt their career development within their organisation was limited or non-existent, 27% held favourable or neutral attitudes towards the subject. The smaller group tended to be the older, more experienced supervisors who had spent several years in their current supervisory position.

The first variable to be examined both by discussion during interviews with supervisors, and by measurement employing a questionnaire scale was the quality of the communicating relationship between the supervisor and his boss (called QUALCOM). On analysis of the interview data it was apparent that the frequency of communication and quality of information communicated (as rated by the supervisor) varied from department to department within the participant organisations. However, 49% of the sample

of supervisors rated their communicating relationship with their bosses as less than adequate and unfavourable attitudes were associated with all three categories ("Not very useful", "Poor", and "None" - Table 34) which comprised the 49% group. Those supervisors who rated their communication with their bosses as "less than adequate" often referred to a poor overall relationship with their manager.

The quality of the information passed from manager to supervisor was investigated by asking supervisors if the information received from their superiors was timely, trustworthy, useful and adequate. On each dimension a majority of supervisors answered in the negative. Integrating the two results, both the content and process of communication between supervisor and his superior are seen as inadequate by most supervisors.

Correlation analysis of the questionnaire data indicates a positive relationship between the supervisors' ratings of the quality of communicating relationship with their superiors and the work attitudes, job satisfaction ($r_s = 0.13$) and job motivation ($r_s = 0.20$, significant at .05 level). This result suggests that higher ratings of quality of communicating relationship are associated with high levels of job satisfaction and motivation.

Sources of supervisors' job satisfaction were discussed during interviews with supervisors and the following issues were identified as the most popular, mentioned by over 40% of all supervisors. They were, in rank order:

1. The successful achievement of departmental production tasks.
2. Quality of relationship with subordinates and supervisors.

3. Rewards of work (pay, salary, praise, recognition).

The main sources of dissatisfaction at work for supervisors as defined by the highest frequency of reference were:

1. Non-achievement of departmental production tasks.
2. Relationships with subordinates and superiors.
3. Attitudes and styles of others (peers, subordinates and superiors).
4. The challenge, variety and lack of clarity of role expectations.

The analysis of questionnaire data concerning job satisfaction reveals two significant relationships. The first, job satisfaction with role ambiguity ($r_s = -0.31$) shows a negative and significant association between role ambiguity and job satisfaction at the .01 level, indicating the tendency that the higher the level of experienced role ambiguity perceived by a subject the lower will be his rating of job satisfaction. One of the most apparent facets of these results is that the two most popularly quoted sources of satisfaction exist in their converse form in the top two rankings of job dissatisfaction. This suggests that the non-achievement of departmental production tasks and relationships with peers, subordinates, and superiors is associated with the level of role ambiguity experienced by supervisors. Interview data provides some further insights in that supervisors referred to relationships with subordinates and lack of clarity surrounding supervisory performance (and, therefore, departmental production performance) as two possible sources of ambiguity.

The correlation between the supervisor's rating of his relationship with his superior and job satisfaction provides some evidence that the quality of the relationship a supervisor enjoys with his superior is positively associated (albeit non-significantly at the .05 level) with job satisfaction, and that low ratings of this relationship are

associated with low values of job satisfaction. This is supported by the results of the interview analysis concerning the sources of job satisfaction and dissatisfaction, relationships with superiors falling into the second most popularly-quoted response category in both sources of job satisfaction and dissatisfaction.

The statistically significant relationship between role ambiguity and job satisfaction does not appear directly in the evidence derived from interview data. The only reference to the influence or effect of role ambiguity as a satisfier or dissatisfier exists in the presence of "lack of clarity of role expectations" as a source of dissatisfaction for supervisors. However, if it is assumed that, in this context, dissatisfaction refers to the low value or negative (minus score) end of a satisfaction scale, then this result may be seen as supportive evidence for the statistical relationship between role ambiguity and job satisfaction.

The occurrence of non-achievement of production tasks and relationships with peers, subordinates, and superiors as the two most commonly-quoted sources of job satisfaction, and their converse as the two most commonly-quoted sources of dissatisfaction, may be the result of supervisors equating job dissatisfaction with low levels of job satisfaction. Rather than another concept, the two rankings may be describing the opposite ends of one scale rather than two different scales.

Results of the analysis of interview data concerning job motivation indicate the importance of the role played by interpersonal relationships in influencing motivational levels. 53% of supervisors in the main study identified relationships with subordinates and superiors as significant influences upon motivation levels. The top three most popular influences on motivation levels, as identified by supervisors, were:-

1. Interpersonal Relationships
2. Job Satisfaction
3. Work Rewards.

Job motivation, as measured by the questionnaire scale, was associated with several other variables which were measured by the supervisor's questionnaire. They were job motivation with job satisfaction ($r_s = 0.37$, significant at .001 level), with role ambiguity ($r_s = -0.29$, significant at .01 level), with quality of communicating relationship with superior ($r_s = 0.20$, significant at .05 level), and with overall relationship with superior ($r_s = 0.22$, significant at .05 level). The result of correlation analysis of the association between the overall rating of relationship between supervisor and superior and job motivation, supports the evidence generated by interviews with supervisors. The role of interpersonal relationships seems to be perceived as having a significant influencing effect upon motivation of supervisors. The data from both questionnaires and interviews identify the quality of the relationship the supervisor enjoys with his superior as a factor related to levels of supervisors' motivation.

Job satisfaction provides another source of evidence which can be used to examine the congruence between questionnaire and interview data. 27% of supervisors interviewed in the main study referred to job satisfaction as an important influence upon job motivation, suggesting that if an individual experienced high levels of motivation he would be motivated to repeat his performance and achieve a similar level of satisfaction. The two variables are positively correlated ($r_s = 0.37$); the relationship being significant at the .001 level. The quality of communicating relationship variable, as a measure of an interpersonal relationship, further supports the evidence of the interviews in that it is positively and significantly correlated (at the .05 level) to job motivation.

No direct reference to role ambiguity is included in the three most popular influences described above. There is, however, a negative and significant (at the .01 level) relationship between role ambiguity and job motivation as predicted by the research hypotheses.

The supervisors' relationships with their subordinates were described during interviews, in most cases (67%), as close or friendly. These supervisors often referred to a close relationship as a prerequisite for the achievement of production tasks, which, as described earlier, plays a central role in the level of satisfaction felt by supervisors.

Role ambiguity was investigated both by discussion with supervisors during interviews and examination of the data from questionnaires. The most commonly described ambiguous aspects of the supervisory role referred to by supervisors were:

1. Physical involvement in the production process.
2. Criteria for effective supervisory performance.
3. Relationship with subordinates, orientation and group membership.

These subjects were all seen in predominantly unfavourable terms by supervisors, suggesting the negative influence of role ambiguity or lack of role clarity upon supervisory work attitudes. Four statistically significant relationships with role ambiguity were identified from the analysis of questionnaire data. They were role ambiguity with the overall relationship between supervisor and superior ($r_s = -0.27$), with quality of communicating relationship between supervisor and superior ($r_s = -0.26$), with job motivation ($r_s = -0.29$), and with job satisfaction ($r_s = -0.31$). These results, supporting the interview results, confirm the negative influence of role ambiguity upon both job motivation and job satisfaction.

The analysis of the interview data resulting from discussion of the subjects' supervisory status, responsibility and authority, supports the statements made previously concerning erosion of the supervisory role. Most supervisors reported that their status, authority and responsibility had been reduced during their working experience as supervisors. Attitudes associated with current levels of status, responsibility and authority indicate that in the cases of status and authority supervisors hold mainly negative, unfavourable attitudes towards them. In the case of responsibility, supervisors see their current position as largely favourable, despite an apparent reduction in levels of responsibility. It is, therefore, perhaps inappropriate to include responsibility in the statement concerning "erosion" of the role which infers some disadvantage to supervisors.

The definition of responsibility is, however, somewhat limited by the interpretation placed by supervisors on the description of the term (mentioned elsewhere) by the author. In attempting to define the term in a manner which is most acceptable and understandable to supervisors there is a danger that academics may adhere too closely to their definition of the term (in this case, duties to which some accountability is attached). Supervisors may in fact express feelings that responsibility has increased over time, yet, unless their duties are evaluated, it may be that this is not so. It is possible that 'feelings of responsibility' may not accurately reflect the reality of the supervisors' duties.

This is perhaps a common characteristic of the qualitative nature of research adopted in the current study and emphasises the limitations of such research. The risk of inaccurate analysis is heightened when researchers focus

upon the need to communicate with other academics in reporting the results of their research. The practical flavour of results becomes clouded in an attempt to rationalise the responses of subjects and generalise from the results of analysis of data in order to improve the academic acceptability of the research findings.

Interview data resulting from discussions with managers provide some evidence concerning supervisory role perceptions of managers interviewed. Whilst a comparison between the rankings of important task elements of the supervisor's job produced differences between managers' and supervisors' rankings, the criteria for "effective" supervision suggested a high degree of congruence between managers' and supervisors' perceptions. The rankings of both managers and supervisors are presented overleaf in Table 51.

Both groups place a detailed knowledge of plant and products in one of the top two places, and items 2 and 3 of the managers' criteria could be collapsed and equated to item 3 of the supervisors' criteria. Whilst the managers list includes an additional item - "willingness to learn" - the central theme of the criterion was the ability of the individual supervisor to solve problems, particularly those occurring on the shop floor where no redress or

consultation with superiors was immediately feasible, quickly and effectively.

TABLE 51 CRITERIA FOR EFFECTIVE SUPERVISION

<u>SUPERVISORS'</u> <u>CRITERIA (N = 127)</u>	<u>MANAGERS'</u> <u>CRITERIA (N = 41)</u>
1. Shop floor working experience.	1. In-depth knowledge of plant and process.
2. Detailed knowledge of plant and products.	2. Ability to gain respect of subordinates and superiors.
3. Ability to manage men, achieve respect.	3. Skill in managing men.
4. Ability to solve problems.	4. Ability to solve problems and a willingness to learn.

Managers' interviews generated a list of task elements which they saw as the most important components of the supervisory work role. The three most popular elements were:

1. Ensuring production targets are achieved through management of the shop floor work group.
2. Modifying, changing plant and machinery.
Reorganising production lines.
3. Managing breakdowns, absenteeism and other interruptions in the production process.

Each of the above elements was mentioned by about one third of all managers interviewed. The ranking of these elements may be contrasted with the rankings of supervisory task elements presented in Table 49 under the heading of "Manager Rankings". Here, managers have ranked items which were presented to them in questionnaire form, rather than

having necessarily thought of them for themselves as was the case in the above list. A final interpretation of the findings of the main study with reference to the results of other research studies will be presented in the final chapter. An assessment of the usefulness of the theoretical model follows below.

6.2 Evaluation of the Theoretical Model

Multiple regression analysis is the technique which has been used to analyse the explanatory value of the theoretical model presented earlier. It is a technique which has been used to explain the relationship between a single dependent variable (here, job motivation) and several independent variables, (in this case discrepancy of supervisors' role perceptions with managers', the relationship between supervisor and superior, the quality of the communicating relationship between supervisor and manager, the supervisor's need for clarity, role ambiguity experienced by the supervisor, and the supervisor's job satisfaction). These two types of variables can also be given the nomenclature criterion and predictor variables respectively. The analysis has been used only on the metric data collected by use of the supervisory questionnaire. In the context of this study the technique is used as a descriptive tool, focusing upon the strength and direction of relationships between the variables in the model. It is therefore necessary to examine the correlation coefficient, r , and the coefficient of determination, r^2 . The sign of r indicating the direction of the relationship, whether positive or negative, whilst the absolute value of r can be employed as an index of the relative strength of the relationship. A stronger indicator of the strength of the relationship is shown by r^2 , which indicates the proportion of variation in the dependent variable (job motivation) explained by another variable. A summary of the results of the analysis are shown below:

TABLE 52 STEPWISE MULTIPLE REGRESSION OF JOB
MOTIVATION ON JOB SATISFACTION, ROLE-
AMBIGUITY, NEED FOR CLARITY, QUALITY
OF COMMUNICATING RELATIONSHIP, NUMBER
OF YEARS AS FOREMAN, AGE OF FOREMAN,
RELATIONSHIP WITH BOSS, DISCREPANCY IN
FOREMAN'S ROLE PERCEPTIONS

<u>VARIABLE</u>	<u>MULTIPLE R</u>	<u>R SQUARE</u>	<u>F VALUE</u>	<u>V_1/V_2</u> *
1. Job Satisfac- tion	0.32	0.10	7.23	7.08 (.01)
2. Role ambi- guity	0.37	0.14	5.08	4.98 (.01)
3. Need for clarity	0.39	0.16	3.86	3.54 (.025)
4. Quality of communicating relationship	0.42	0.18	3.28	3.01 (.025)
5. Number of years as foreman	0.44	0.19	2.95	2.79 (.025)
6. Age of foreman	0.45	0.20	2.53	2.25 (.05)
7. Relationship with boss	0.45	0.20	2.15	2.17 (.05)
8. Discrepancy in foreman's role percep- tions	0.46	0.21	1.93	(.05)
* Critical values for F at specified levels of significance.				

The significance of F values for each variable added on each step is included in the table and shows that the final two variables in the list are not significant at the .05 level, the critical values for F at the relevant significance levels are also shown.

If the Job Motivation variable is given the notation Y, and each of the independent variables the notations X_1 and X_6 respectively, then:

$$\begin{aligned} \text{The variance in Y} &= \text{Variance explained by } X_1, X_2 \dots X_6 \\ &\quad + \text{Unexplained variance} \\ &= 0.21 + 0.79 \end{aligned}$$

The total variance in the dependent variable, therefore, explained by the above variables is not more than 21%. This appears to be a rather modest value; however, the model only examines several of the variables thought to influence the supervisors' motivation, and therefore would only be expected to explain a proportion of the total variation in the dependent variable, motivation. The three most significant variables in terms of their ability to explain the variation in the dependent variable, job motivation, are, need for clarity, job satisfaction, and role ambiguity.

The multiple regression test employed in the above analysis refers to that described by Nie et al (1975) and produces, as part of the output from the test, B values, the partial regression coefficients. These B values may be used as measures of the influence of each of the independent

variables upon the dependent variable, with appropriate adjustments made for all other independent variables.

The partial B values resulting from the analysis indicates that one standard deviation change of job satisfaction would produce the greatest change in job motivation, then in descending order of influence, role ambiguity and need for clarity.

Whilst this study has not been intended to explain the total variation in motivation levels of subjects, it was hypothesised that role ambiguity would explain a significant amount of the variation in individual subjects' motivation, which is apparently not supported by the evidence of the analysis above. The value of this model is, therefore, its ability to explain part of the variation in job motivation, albeit a modest part. There seems to be some consistency between interview and questionnaire results in that job satisfaction has been identified as the variable which appears to be most closely associated in the feelings of motivation for the variables and subjects discussed and measured.

The model may be described as a "closed system" model (Likert, 1976) in that there is a boundary between the variables in the model and other variables not directly concerned with the individual. These other variables may have impact upon some of the individual variables described in the model (e.g. environmental variables). Whilst some environmental variables have been discussed during interviews they have not been included in the theoretical model as component constructs. Argyris (1975) and Schon (1974) describe the essential criteria for the usefulness of a theoretical model which explains some aspect of organisational behaviour. They suggest that perhaps the most important criteria is that the model needs to be explicit if it is to be useful. This is seen as the most critical characteristic as, if the model fails in this criterion, then it is not possible to test or validate the model. The relationships between the variables, as is the case in this study, should be described and identified in terms of measurement,

definition and limitation of use.

It is suggested, (Kuhn, 1970) that models should display some elements of scientific thought by being linked to current literature by their consistency with existing theoretical approaches. The third element for evaluation of the model is the empirical validation of the model. In order to establish if a network of relationships previously specified (as in this study) do represent the reality of organisational settings, the model requires testing. The testing of the model can be accomplished by data collection and examination of the data analysis with due consideration to alternative hypotheses and explanation of phenomena. The process closely resembles that which has taken place in this study and the results suggest that in the case of this criterion, the model is partly successful as an explanatory tool in that there is some empirical support (resulting from analysis of questionnaire and interview data) for the previously specified network of relationships. The final two important criteria as suggested by Argyris (1975), are those of face validity and generalisability. To the extent that a model may be used as a medium to communicate results or outcomes of research, the model will need to show a minimum degree of face validity. The model should be comprehensible and relevant to the day to day work experiences of the organisational members concerned with the communication of research results. This issue will be covered in more detail in the following chapter where the usefulness and benefit of the research results to participating organisations are discussed.

Generalisability is the last characteristic criterion and concerns the applicability of a model to a range of different settings so that the limits of use of the model may be established. In this study only similar organisational settings have been researched, the level of

analysis has consistently been the individual production supervisor in the food manufacturing sector of industry. The subject of generalisibility is one which confronts every researcher during his or her study at some stage. After conducting the study the researcher is often faced with the problem of deciding to which populations the results of the study can reasonably be generalised. The academically rigorous answer would be that the solution is a function of the sampling procedure and, therefore, the subsequent sample employed in the study. The procedure used in this study has resulted in an "incidental" sample being used, only those organisations wishing to participate in the study have done so. Whilst that group of organisations is clearly a function of the original sampling method of random selection (of organisations), the final outcome was not controlled by the author in terms of selection of those organisations wishing to participate.

Glaser and Strauss, (1967) describe the process of sampling as the major determinant of the generalisibility of the research outcomes and this process is defined by a set of rules. These rules become important as they specify the procedure which should be followed so as to increase the generalisibility and theoretical relevance of the results of the research. In the case of this study the population, from which the sample has been drawn comprises all production supervisors working in the operations function of food manufacturing organisations in the food industry. A simple random sample was selected from the total "self-selected" population of supervisors who were employed by the 9 participating organisations. The most limited level of generalisibility which may be applied to the results of the study would be the individual organisations to which the respondents belong. The next level of generalisibility could be to apply the results to the product sector within which the research has been conducted. Widening the

area of generalisibility, the results may be relevant to all production supervisors currently employed in the food manufacturing sector of industry. The final limit of generalisibility, whilst remaining within the realms of academic respectability, would be relevance to all production supervisors employed within the manufacturing functions in all industries. The author feels that the most relevant and credible statement concerning generalisibility is that it should have relevance for those product sectors which have been studied. This belief has been derived from the lack of knowledge of the other product sectors not studied and the limited representativeness of the final sample, in that it was, in the initial stages of sample selection, "self-selected".

It has been mentioned earlier that the independent and dependent variable labels have been assigned by the author. In this study both the independent and dependent variables have been measured and some found to be significantly, albeit modestly, related to each other. The fact that role ambiguity, defined as an independent variable here, has been found to be associated with the nominated dependent variable, job motivation, does not naturally lead to the conclusion that the independent variable is responsible for changes in the dependent variable. As the study has been designed to focus on a few selected variables which were thought to be salient factors in influencing supervisory work attitudes, there are probably numerous other variables that may be impacting upon either, or both, of this study's independent and dependent variables. Clearly, no conclusion concerning causal relationships between the two sets of variables has been made due to the fact that results of statistical correlation techniques alone cannot be used to support arguments of causality. There are a number of techniques, however, which allow the researcher to evaluate the assumption of causal connections amongst variables using

data from field studies such as this (Kerlinger and Pedhazur, 1973, Asher, 1976).

The discussion above identifies perhaps one of the major weaknesses of the ex-post facto research design such as the one employed in this study. That is, the inability to control variables and collect data on possibly confounding variables. The researcher is often not in a position to eliminate numerous converse or rival hypotheses for the relationships which may be identified and the data on potentially confounding or confusing variables are vital if competing hypotheses are to be discarded. These data enable the research to hold constant effects of extraneous variables.

In the case of this study, as in many ex-post facto research designs, only competing hypotheses connected with potentially confounding variables which have been measured may be disregarded. The researcher often has no clear idea of how many or which unmeasured variables are influencing the research results. The argument concerning the strength and application of hypotheses which may have been supported by data from a study such as this is, as has been described above, limited. However, the strength of such a study lies in an examination of the practical research alternatives. If there is, as has been suggested by researchers (Mayntz et al, 1976, Denzin, 1978), a need to study and extend knowledge about human attitudes and behaviour in organisational settings, a non-experimental research strategy may be one of the most appropriate designs a researcher may employ to meet such a need. Indeed, results of such a research design may generate hypotheses that can be examined in a more rigorous manner, such as in an experimental research design. Furthermore, reliance on research designs excluding the field study (i.e. experimental and quasi-experimental design) may

preclude the discovery of important relationships relevant to the study of behavioural sciences.

6.3 Summary

The following summary focuses upon the major findings arising from the results of this study with reference to the original research objectives and the degree to which they have been met.

In answer to the question concerning the major changes which have occurred in the supervisory role, several statements for which supporting evidence has been discovered are worthy of note. Supervisory role changes are seen by over half of all supervisors in the main study as attributable to management personnel changes or changes implemented by managements. The remaining minority of supervisors define the major role changes in their supervisory experience in terms of those elements described by Thurley and Wirdenius, (1973), as "erosion" of the supervisory role. They include such changes as increases in the power and status of shop floor trade unions, reduction in supervisor-subordinate wage differentials, the introduction of specialist functional departments, and the discrepancy between supervisory responsibilities and authority. All the above perceived changes are viewed as unfavourable by supervisors in the sample.

The results of data analysis concerning supervisory perceptions of group membership tend to contradict the often-quoted "man in the middle" thesis in respect to the supervisor's perceived organisational position in that a large majority of supervisors believe that they are more closely associated with the shop floor work group. Additional support for this result comes from the supervisory rankings of task elements in which supervisors place "working with subordinates" as the most important task

element in the supervisory role.

As management commentators have reported elsewhere (Davis et al, 1966, Meade et al, 1966), supervisors in this study tend to suffer from what appears to be limited career development opportunities, however, only a small minority saw this situation as unfavourable.

The rating by supervisors of the quality of communicating relationship between the supervisor and his superior, was as varied as the frequency and practise of communication varied across production departments in each participant organisation. However, a test was applied across all six participating organisations to identify whether there were significant differences between the average score of this variable. The Null Hypothesis being:

"There is no difference in the average score of supervisors on the quality of communicating relationship variable from the different participating organisations".

The Alternative Hypothesis states that the average "quality of communicating relationship" scores from each organisation are not all equal. The test employed was the Kruskal-Wallis one way analysis of variance by ranks (Siegel, 1956, p. 184-194). The results of the test ($H = 9.15$, $df = 5$) indicate that at the .05 level of significance the average score was not different across the six organisations. The observed value of H was more than the previously set level of significance, i.e. .05, therefore H_0 cannot be rejected ($p = 0.1$). Despite apparent variation between departments then, the average rating of the quality of communicating relationship between the supervisor and his immediate superior, as rated by supervisors, was not significantly different across all six main study organisations. A majority of supervisors viewed their communicating relationships with their bosses in unfavourable terms.

There are indications from the correlation analysis that there is a positive relationship between the variable quality of communicating relationship and the work attitudes, job satisfaction ($r_s = 0.13$) and job motivation ($r_s = 0.20$, $p = .05$). There is support for the statement that the quality of communicating relationship between boss and supervisor may exert some influence upon the supervisor's job satisfaction from the data generated during discussions of job satisfaction. During these discussions, supervisors identified relationships with superiors and subordinates as a major source of job satisfaction and as there is a positive and significant relationship between the quality of communicating relationship and the supervisor's overall rating of his relationship with his boss ($r_s = 0.56$, $p = .001$), then it seems likely that the quality of the supervisor-superior communicating relationship may effect the level of job satisfaction experienced by the supervisor.

Considering the sources of supervisory job satisfaction, as identified by supervisors in the study, two other issues were described. They were the successful completion of the departmental/section production tasks and the quality of working conditions. The first two factors isolated by supervisors as sources of dissatisfaction were both mentioned, in their converse forms, as sources of job satisfaction being the non-achievement of departmental production tasks and relationships with subordinates and superiors. Other subjects which fell into this category were the work attitudes or personal "style" of others (superiors, colleagues and subordinates) and the degree of challenge, variety and clarity in the supervisory work role.

The indication that two sources of job satisfaction in their converse form (either by their absence or a low level) form two sources of job dissatisfaction, suggests

that supervisors view satisfaction and dissatisfaction as one bi-polar scale of satisfaction at work.

Job satisfaction is negatively and significantly related ($r_s = -0.31$, $p = .01$) to role ambiguity indicating some support for the original hypothesis that role ambiguity is negatively related to work attitudes, specifically job satisfaction. The strength of the relationship between role ambiguity and job satisfaction does not appear in the results of analysis of interview data; only a small minority of supervisors referring to what might be called a lack of role clarity (which may be seen as synonymous with role ambiguity).

Results from the supervisory interviews have provided evidence to suggest that many supervisors recognise the element of interpersonal relationships at work as an important influence upon their job motivation. The three most commonly-quoted influences upon supervisory job motivation were interpersonal relationships, job satisfaction and the value of work rewards. The questionnaire data tends to support the evidence of the interviews presented above in that both the quality of communicating relationship and overall rating of relationship with boss are positively and significantly associated with job motivation (at the .05 level). The results show that managers and supervisors in the study tended to agree about the criteria for the selection of potential supervisors, that is, those characteristics of the role incumbent thought to be required by individuals who are to become effective supervisors. The theoretical model has been evaluated for its explanatory power, that is, the ability to explain the variation in motivation of industrial supervisors. Its value does not appear to lie in the explanation of the variance in job motivation, all the independent variables accounting for no more than 21% of the total variance in job

motivation. The most important independent variables in terms of their influence upon the dependent variable, job motivation, have been shown to be job satisfaction, role ambiguity and need for clarity, in descending order of importance. The limitations of the power of the model has been described and the degree to which criteria for the usefulness of such a model presented. From the viewpoint of identifying some of the significant relationships between salient variables (salient from the perspective of supervisors' attitudes), the model seems to possess a higher level of utility.

The research objective of supervisory role clarification has to some extent been met by the data generated during interviews with supervisors and the subsequent role analysis and comparison with data from their managers. Several popular statements concerning the supervisory role have been confirmed by this study, fewer have been contradicted.

The approach taken in this study of investigating the supervisory role with reference to the supervisor-superior relationship has been supported by the results which indicate the important influence of interpersonal relationships upon supervisory work attitudes. This result has particular relevance to the work of Salancik and Pfeffer (1975), who suggest that supervisory behaviour is probably primarily influenced by the immediate superior manager.

Other elements of the research which have specific relevance to the research of others are the perceived discrepancy between supervisory responsibilities and authority, and the disagreements between supervisors and their superiors concerning supervisory task priorities and authority. Both of the above issues are examined by Partridge and Child (1982), who have reached similar results.

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CHAPTER SEVEN

INTERPRETATION OF RESULTS OF THE
STUDY AND CONCLUDING REMARKS7.0 Introduction

The summary of the findings of the main study reported in Chapter 6 indicated evidence for to support five of the six research hypotheses presented in Chapter 2, a discussion of the usefulness of the theoretical model, and an overview of the role perceptions of both supervisors and their immediate superiors with respect to the supervisory role.

The purpose of this chapter is to interpret the results of the study which have been presented to practising managers, and to describe the benefits which may be derived from participant organisations. This theme is consistent with the approach adopted throughout the study and the presentation of the thesis. That is, the author has emphasised the practical elements of the study. For example, discussions of fieldwork activities have concerned what happened, problems which confronted the author, and a detailed report of the process of fieldwork in an attempt to provide the reader with sufficient information for replication of part or all of the study, and an accurate record of research activities. The compromises which have been made in the research have been described and the presentation of results reflects the practical limitations of data collection in the field.

In addition to the purpose described above, this chapter introduces discussion of those research outcomes which can be described as contributing to a further clarification of the supervisor's role, including those elements of the

supervisory work situation which are considered to influence the attitudes of the supervisors participating in the study. Finally, some possible directions for future research in the field are presented.

7.1 The Practical Value of Results

It has been mentioned previously, that in order to fulfil the research 'contract' with each participant organisation, the author has provided an individual report to every organisation, summarising the main results of analysis of data collected from supervisors and managers within each company. There were clear differences between organisations in terms of their objectives in participating in the research study, which provided one focal point when presenting the feedback of the research results.

The different objectives of participating organisations as described by managers within their respective organisations included:

1. A 'Position Audit' to identify current attitudes of supervisors towards their work generally.
2. To assess the impact of specific organisational activities (e.g. training programmes, new products, processes) and the supervisors' attitudes towards them.
3. To identify criteria for "effective" supervision with reference to perceptions of supervisors and managers.
4. To understand the factors which influence the attitudes of supervisors towards their work.

The first objective described above included a summary of results from both questionnaire and interview data collected within the appropriate organisations. Of particular interest to the participating organisations falling within this category, were the attitudes of supervisors towards their immediate superiors, factors which were described as influencing job motivation and job satisfaction, and supervisors' attitudes towards group membership. The feedback, therefore, highlighted the association between supervisors' ratings of the quality of communicating relationship between supervisor and manager and the overall rating of quality of the relationship between supervisor and superior. This latter relationship was seen by managers receiving the feedback as important as there was evidence to suggest that the quality of the supervisor-superior relationships, as rated by supervisors, had a positive relationship with job motivation. The issue of supervisors' motivation was described by managers during the feedback as "of concern" as they described the current mood of many supervisors as one of "low morale".

In the case of one organisation concerned with the achievement of the first objective above, managers described a situation attributed largely to unionisation of supervision and an inflexible pay structure, where they found it difficult to differentially reward, in a financial sense, supervisors whose performance varied between acceptable and superior. They were therefore concerned to discuss the opportunity of improving motivation of supervisors through non-financial means and the relationship between supervisor and manager was one issue suggested which could be improved. Additionally relevant for the same organisation was the difference in supervisory role perceptions between managers and supervisors. Senior managers felt that there would be close agreement between managers' and supervisors' perceptions of the most important task elements in the

supervisory role. The results of the data analysis indicated that there was a difference between rankings on several items, more importantly perhaps in a practical context, the first ranked item, and this was viewed to be a significant difference by those managers who received feedback of the results.

The major practical benefit derived from the results of the study would seem to be the indication that the interpersonal relationship between the supervisor and his manager has a salient influence upon the supervisors work attitudes. The outcome therefore, for those organisations who expressed the achievement of the first objective as an important research goal, was that where previously much managerial time and effort had been directed towards supervisory development and training on an individual basis, that is supervisor by supervisor, there was now evidence to suggest that the supervisor's superior could profitably be closely associated with supervisory training and development. The aim of such an association would be to improve the relationship between supervisor and manager.

One example of the usefulness of the results has emerged in the form of a training/teaching vehicle which has been designed from the research results. Appendix 5 comprises a combined case study/role play of a meeting of a manager with his supervisors (3), all of whom are employed by a meat products manufacturer. The objective of this material is to provide an opportunity for managers and supervisors to practise their communication skills and present them with some typical supervisors' personal and work problems which require solution during the meeting simulation. A further aim of the exercise is to encourage improved relationships between supervisors and managers. Both managers and supervisors play the roles of the manager as well as a supervisor and each experiences role reversal in the course of the exercise which has been used as a teaching/

training vehicle with groups of managers (in-company) and post graduate management students (MBA group at Cranfield School of Management).

Another direction indicated by the results was the establishment of a formal mechanism for communication between supervisors and managers, and the concept of briefing groups was suggested. In the discussions that followed feedback of the above results the issue of career development was raised by managers as a potential motivator. The results of data from the relevant two organisations showed that only a small minority of those supervisors interviewed felt they would like to progress to second line management positions or that the opportunity to do so would act as a motivator for them. This tends to reflect the overall response pattern of all supervisors interviewed in that a minority indicated that career progression opportunities were either attractive or would act as a motivator. The evidence from this study, therefore, conflicts with that presented by Sasser and Leonard (1980), which suggests that the supervisor is de-motivated by the fact that he is at a "dead end in career progress and development".

The second category of objectives identified by participating organisations included the assessment of the impact of specific organisational activities and the supervisors' attitudes towards them. One organisation was particularly concerned to evaluate the effect of a number of supervisory training events which had recently occurred. The data from interviews concerning supervisors' attitudes towards training and development were therefore presented in some detail. The training events were designed by the training department of the organisation to improve the performance of supervisors in their jobs, the major concerns expressed by managers were that the training would be ineffective in that it may be seen as inappropriate by

participants, and the overall effect upon supervisors would be to raise participants' expectations concerning their career development. The most common attitude to the training events in question which arose from discussion of the subject during interviews was that most supervisors saw the training in a favourable light. The major benefit, however, was defined as the opportunity to discuss work-related problems with peers and superiors. The less-often quoted benefit was described as learning about how to supervise men or man-management skills. The remaining group of supervisors could not identify any positive benefit but many felt that training was, overall, a "good thing". With respect to the concern expressed by managers over the possibility of raising expectations about career development opportunities for supervisors, the overall sample pattern was reflected in the attitudes expressed by supervisors, that is, a majority of all supervisors in the organisation in question reported that they felt there was little or no opportunity for career development with the company. 76% expressed a positive attitude towards this situation, 13% were neutral and the remaining 11% viewed the situation unfavourably. 14% of the supervisors in this organisation described a belief that there were clear career development (promotional) opportunities within the company for them. There was evidence to suggest that, in this organisation, the majority of supervisors' expectations concerning career development had not been raised and that some benefit was derived by supervisors from the training events.

The third category of objectives consisted of a determination of criteria for effective supervision referring to both supervisory role perceptions of managers and supervisors. Here, the organisation's interest was to gather data which may be used as part of an appraisal system for supervisors. The first step in such an exercise being the identification of the important task elements

which comprise the supervisory role.

The data generated by supervisors and managers in the organisation suggested that the supervisor rated working with his subordinates as of higher importance than any of the other elements. Managers, however, consistently ranked this item in second or third place. This may have explained part of the generally poor ratings of supervisory performance amongst managers, that is, if supervisors were directing their major efforts towards the issue they felt was most important in their work role (Rank 1) and managers disagreed with this rank, then it seems likely that superior performance ratings of supervisors by managers would be rare.

Finally, category four objectives were defined by the relevant organisation as an attempt to determine which factors in the supervisory work situation influenced the attitudes the supervisor held towards his work. Whilst this study examined only a small number of variables which may be thought to influence supervisory attitudes (the data analysis illustrating statistically significant relationships between the variables studied), emphasis was placed upon the variables which correlated significantly with the variables job motivation and job satisfaction. Clearly, there are other variables and relationships which explain a greater amount of variation in both of the variables mentioned above, however, the results of this study provide some pieces of the attitudinal "jigsaw puzzle" of supervisors.

Work attitudes of supervisors were held by managers in the above organisation to be important largely from the viewpoint of the effect of supervisory behaviour upon subordinate (shop floor) work group performance.

One common theme that existed amongst all organisations participating in the main study was the surprise

expressed by managers concerning the feedback of the results of data analysis about supervisory "group membership". The results of this study show a clearer, more consistent group orientation for the supervisory sample studied than those of Nichols and Beynon (1977), who described a "split" within the supervisory ranks encapsulated in the phrase "not all foremen are management".

The overwhelming alignment and association of supervisors with the shop floor work group consistently surprised managers receiving feedback. Many managers referred to membership to the "management team" which they believed were successful. The major question then arose concerning the effectiveness of the supervisor in various orientations. Would the supervisors be more effective in terms of successful achievement of the main supervisory production tasks oriented towards the shop floor work group or more closely associated with the management team? Managers generally believed the latter situation would be more effective in organisational terms, supervisors the former. Perhaps the most salient question would be "does it make a significant difference to organisational performance (in production terms) which camp the "supervisors' feet" are in? No research in this study has been conducted to address that particular issue so the question remains, for the time being, a potential direction for future research.

The usefulness of the research in the case of the orientation of supervisors served to raise further research questions. There was some preference by managers for the explanation which supported their behaviour to date. That is, as they had been encouraging the identification and membership of supervisors with the management team, this orientation is more likely to lead to more effective supervision than the alternatives of "middle man" or "shop floor work group" member.

One further common theme which is reflected in the results of research in all organisations in the main study was the perceived discrepancy of many supervisors (34% of all supervisors interviewed in the main study) between their responsibilities and their authority. This result was reported to participating organisations and became an issue for further discussion due largely, as was expressed by managers receiving the feedback, to the fact that this subject may be one over which managers can have some control or influence. The discrepancy described between supervisory responsibilities and authority supports the findings of several other researchers (Child, 1982, 1975, Driscoll et al, 1978). Driscoll et al describe their results as indicating that "first-level supervisors are held responsible for producing organisational results through their subordinates, but lack the control over the means to motivate their workers". The current study indicates that the non-achievement of production tasks may negatively influence perceived levels of supervisors' job satisfaction, and if the lack of control described above contributes to the non-achievement of those tasks then it is likely that level of supervisory control may be one of the variables managers may wish to influence in order to achieve improved supervisory task achievement and hence, supervisors' job satisfaction. The effect of lack of control is described by Sasser and Leonard (1980) as likely to generate high levels of frustration in first level supervisors. The concept of lack of control is similar to the discrepancy described above between responsibilities and authority and appears to have a similarly negative association with supervisors' attitudes.

The above discussion reflects the value, as assessed by managers, of receiving feedback concerning issues or variables over which they have some power or influence to control. In the interpretation of the results for participating organisations, much interest was generated by emphasising those variables managers felt were controllable. For example, the role and power of shop floor trade union representatives and the relationship between

changes in legislation, and the attitudes of supervisors to their work were of less perceived value as items of feedback to managers, apparently due to the perceived lack of influence or control of managers over these variables.

In two cases feedback of results of the study of participant organisations was conducted by means of seminars conducted by the author, to both supervisory and management groups. The main value of this exercise as described by participants, was an understanding of supervisors' attitudes towards aspects of their work and a discussion of common problems experienced by supervisors and managers in their respective work situation, but with reference to the role of the supervisor in the achievement of production tasks. The groups of managers were particularly interested in the value and influence, as expressed by supervisors, of the interpersonal relationship between supervisor and immediate superior. The apparent influence of managerial behaviour towards supervisors (for example, style of managing supervisors including perhaps most importantly the communicating style of managers) was perhaps of most interest to these groups.

7.2 Contribution of Results to the Clarification of Supervisory Role

That the role of supervisor has undergone substantial change in the work experience (main study mean 5-6 years) of supervisors in this study is supported by clear evidence from interviews. This development has been confirmed by many other researchers (Dunkerley 1971, Child 1975, Sasser and Leonard 1980), and is commonly regarded as "role erosion" largely as a result of the negative effect these changes are thought to have upon supervisors' work attitudes. The negative response from a large majority of supervisors in this study supports the above statement

but distinguishes between those role changes which have been attributed by supervisors to the changes effected by managerial decisions and those changes which have occurred which cannot, from the supervisors viewpoint, be associated with decisions made by management. If this is an accurate summary of how changes in the role of supervisors have occurred, then individual managements hold most of the responsibility for the current condition of the supervisory role.

There are indications from the study that there are clear differences between the perceptions of the supervisory role between supervisors and their immediate superiors. The ranking of the importance of task elements by managers and supervisors tends to support this view. The results of the examination of supervisory orientation or group membership and allegiance suggests the "man in the middle" description, in terms of the supervisor's position, may not now be appropriate as Colin Fletcher found in his study. Whilst managers have described their attempts to encourage supervisors to feel part of management and see themselves as first-line managers, many supervisors perceive their position as closely associated with the shop floor. Indeed, the behaviour and policy of management towards this issue, as perceived by supervisors, may be contributing to their feelings of ambiguity and dissatisfaction. A common complaint relevant to this subject appears to be that the "words do not match the the actions". This may serve as a further example supporting the suggestion (described above) that the current condition of the supervisory role is largely a result of the decisions and behaviour of managers.

There may be some benefit in managers considering the recognition of the supervisor not as a first-line manager, but as the supervisor of a shop floor work group. Rather than attempting to encourage the supervisor to pledge his allegiance to the management team, it may be more

realistic to define his role as non-managerial, identifying him as a senior shop floor employee with specific skills and abilities.

Supervisory status is one element comprising those changes which have led to the apparent erosion of the supervisory role. Whilst regarded as largely unfavourable by many supervisors this may be an accurate reflection of the change that has occurred particularly with respect to the changes in supervisory authority. The reality of the situation may be that supervisors have less authority because it has been taken away from them, whether by the increase in the influence and power of shop floor trade unions, the increase in the number of specialist departments, by legislation, or an explicit political act by managers. The implication for managers and others who have an opportunity to influence the role of supervisor and the attitude he holds is that it would be perhaps worthwhile to help the supervisor to cope with this reduction in authority - maybe by making elements of his work tasks more meaningful/challenging - rather than attempting to turn back the clock to achieve previous levels of authority.

7.3 Concluding Remarks

If the controversial influencing link between attitudes and behaviour is assumed to exist in some form, the results of the Salancik and Pfeffer study (1975) are of particular relevance to the findings of the current study. They found that the behaviour of supervisors in their sample was constrained by the demands of others in the supervisory role set. They suggested that the expectations of the supervisors' boss accounted for a significant portion of the observed variation in supervisors' behaviour.

The findings of this study indicate that the supervisor's boss can influence the attitudes of supervisors in the

sample both directly by his behaviour towards supervisors (for example, by his management style), and indirectly, through the results of managerial decisions.

In the Salancik and Pfeffer study, multivariate analysis showed that expectations of the supervisor's boss were more important than those of subordinates or peers in determining the supervisors' work-related behaviour. The results of this study show this may also be the case in terms of the influence of the behaviour of supervisors' bosses upon supervisors' attitudes. This is illustrated by supervisors' responses to questions concerning significant changes in the supervisory role in their work experience as supervisors. Salancik and Pfeffer refer to the uncertainty experienced by supervisors when they suggest "uncertainty is reduced when the behaviours of interlocked individuals become more predictable to each". This appears to reflect upon the working relationship between members of the supervisory role set, for example, the supervisor and his boss. The comment suggests that when individuals become more familiar with the behaviour of others, and can ultimately predict to some extent their behaviour, the level of uncertainty is reduced. An extension of this line of argument leads to the proposal that those supervisors also enjoy a high quality, "close" relationship with their superiors (which includes an effective communicating relationship), would experience less uncertainty, a greater degree of clarity and therefore less role ambiguity than those with poor quality relationships with their bosses.

Supportive evidence for the above proposal exists in the findings of this study which have exposed the negative, and statistically significant, relationship between role ambiguity and both the quality of communicating relationship between supervisor and superior, and the overall rating of the relationship between supervisor and superior.

Referring to the empirical research concerning role ambiguity, study of the concept has progressed in several directions as

it appears to be linked to several different variables. For example, Rizzo et al (1970) showed associations between the variables goal clarity and adequacy of communication. In addition, relationships were found between role ambiguity and formalisation and participation. The current study identifies significant and negative relationships between role ambiguity and job motivation, job satisfaction, the quality of communicating relationship between supervisor and superior, and the supervisor's rating of his relationship with his boss. The two former variables may be described as consequences of ambiguity, the latter two, antecedents.

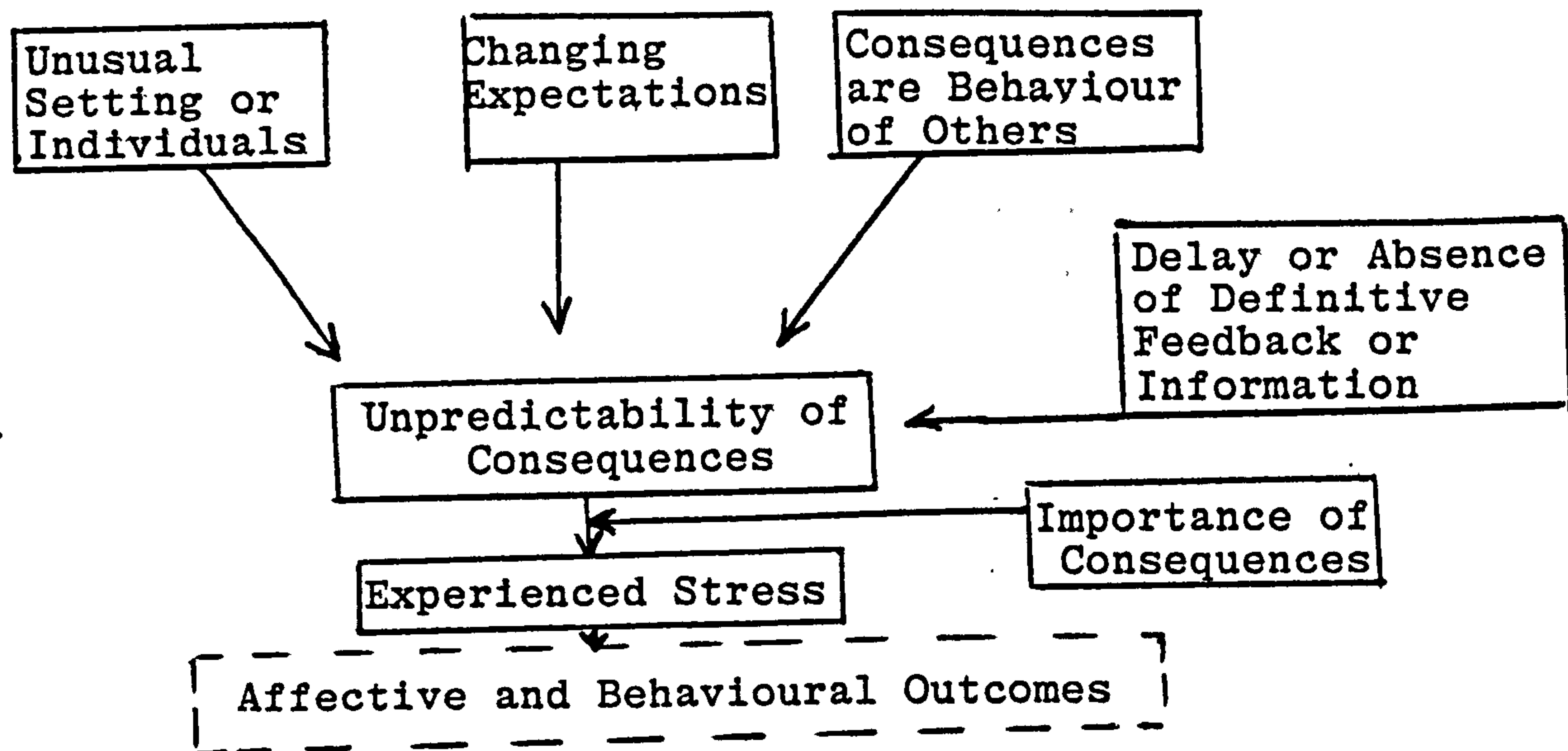
It has been proposed (Pearce, 1981) that role ambiguity and job dissatisfaction are closely related, and further that the inadequacy of communicating relationship, and hence, information transfer, increases the level of role ambiguity experienced by employees. The findings of this study broadly support these proposals, referring specifically to the relationship between the quality of communicating relationship between the supervisor and his immediate boss, and role ambiguity experienced by supervisors.

Pearce has recently (1981) developed a new model which focusses upon the unpredictability component of role ambiguity. It is different from the Kahn et al (1964) concept of role ambiguity and Pearce refers to it as simply ambiguity. In the revised model Pearce suggests that ambiguity be considered as a condition in which the consequences of individual behaviour are weaknesses to them. He further links his model (See Figure 14) with an expectancy model of motivation (Vroom, 1964) which describes the link between effort and performance, the relative predictability of performance being expressed by

$P(E \rightarrow P)$, that is the expectancy that effort will lead to a certain performance level. Pearce hypothesises that four structural characteristics of jobs lead to an individual experiencing ambiguity of behavioural consequences. They are:

1. Individuals in an unusual setting.
2. Individuals whose job-related expectations are changing.
3. Those whose own performance is judged by the behaviour of others.
4. Those who experienced a delay or absence of relevant information or definitive feedback.

He proposes the model is additive, any one of the four characteristics being expected to lead to experienced ambiguity. The model clearly concentrates upon role characteristics rather than organisational-level variables and Pearce admits the need for further research to establish the organisation-role links. The relevance of Pearce's work to the current study is particularly apparent when considering the two final structural antecedents (3 and 4). Supervisors work through their subordinate work group in achieving departmental production tasks and, as many supervisors have expressed, view their own performance as closely linked with that of their own department or section. The delay or absence of definitive feedback or information has been found to be a common perception amongst supervisors, particularly with reference to their own performance in the supervisory role, and links with supervisory ratings of their communicating relationship with their immediate superiors.

Figure 14 (From Pearce, 1981) A Model of Ambiguity

Some recommendations for overcoming some of the dysfunctional aspects of the issues described above have been presented earlier in this Chapter. Some additional suggestions are proposed in the following discussion.

If supervisors are to achieve an effective work performance they would seem to need to establish a base of authority and also a relationship of mutual respect with their subordinates and superiors. One explanation for some of the negative and unfavourable attitudes expressed by supervisors in this study is the decrease in the levels of authority of supervisors, and an increase in their perceived level of dependency upon other employees. Perhaps one course of action would be to increase supervisors' authority to re-establish the previous levels. This seems, however, to be an unrealistic and probably ineffective solution to the problem because the decrease in the authority of supervisors seems to have resulted from the influence of changes in legislation, managerial decisions and behaviour, and the power of trade unions and their representatives. Supervisors' authority cannot be increased overnight unless they can acquire

what can be described as influencing power. Such power to influence may be acquired should managers decide to delegate elements of their authority downwards. The outcome seems unlikely for the reasons presented earlier. One alternative mechanism for the acquisition of authority and power to influence is by a change in the style and behaviour of many supervisors. If supervisors were to become more politically skilled and adopt a more politically-aware outlook, it seems likely that they would be more able to persuade and influence others.

Child (1982) describes several alternative models outlining the future of the supervisory role, from the abolition of the role to the model of technical supervision. He further recommends that organisations should select the appropriate model depending upon relevant organisational contingencies. The German "Meister" model of the supervisory role is introduced (Child p. 210-213) as one which can be favourably compared to the typical British model. Why then, has not the role been adopted in British companies more enthusiastically? One part of the answer certainly lies in the "relevant organisational contingencies" referred to by Child. The wholesale transfer of the German "Meister" model could be largely inappropriate for many British companies due to what may be described as "cultural" differences. Child and Kieser (1977) refer to factors such as training, reward and decision making practices which comprise some of the significant elements of organisations. The organisational contingencies which would inhibit the effective transfer of the apparently highly successful German model of supervision would involve other external factors, such as industrial legislation concerning the establishment and operation of works councils, supervisory boards, and annual wage bargaining procedures. Other clear differences which have been observed by the author between the typical British and German supervisor concern the discrepancy between their respective levels of authority and responsibility. The German 'Meister' appears to have recognisably more areas of responsibility in terms of being responsible for more, and more varied, work elements. As Child suggests, this is illustrated

by the lower staff/line ratio found in German companies in comparison to British companies. Perhaps as important from the viewpoint of operational effectiveness is the commensurate authority level which often accompanies the 'Meister's' responsibility. He appears to have control over, and generate respect from, not only his subordinates in the departmental work group, but also his colleagues and superiors. He seems to be acknowledged as a first-line manager by his work colleagues as much as a result of the clear, identifiable status and activities associated with his role and the nature of the "Meister" qualification as for his work performance or work behaviour. One of the most commonly-quoted attitudinal elements of the German national stereotype is the "respect for authority" which many German people are thought to possess. At a purely subjective level of observation this is another apparent difference between the UK and German work situation at a supervisory level.

In the author's experience, the German 'Meister's' authority has been unequivocal and accepted by both subordinates and superiors. This implies a respect or recognition of, the supervisor's authority by others which was less evident in the UK organisational situations examined in this study. Indeed, when examining the supervisor's own attitudes towards group membership and allegiance, it would seem that most UK supervisors in the sample saw their subordinates more as colleagues and peers, whose cooperation was required in order to achieve the successful accomplishment of department production tasks. The difference in the types of relationships between supervisors and subordinates that this orientation would suggest in the UK and German supervisory work system may be therefore a combination of both cultural and organisational factors leading to the authority and relationship differences mentioned above. In addition, what appears to be clear well-defined, role-relevant information concerning boundaries of authority, responsibility, promotional prospects and social position are all likely to contribute to a lower

degree of role ambiguity for the German 'Meister' with respect to his British counterpart. Certainly, the relationship between employee representatives and supervisors does not seem to be predominantly one of conflict where the authority of the supervisor is often challenged, and challenged in such a manner that is visible to the supervisors' departmental subordinates.

Relatively little attention has been focussed upon the matching of the individual to the role of the supervisor. Child describes mainly models of supervising roles which should be more clearly defined by the organisation or developed to follow the outlines of the German 'Meister' model or the technical supervisor model. The question of whether the apparent history of poor supervisory performance is concerned more with issues of organisational role elements or personal characteristics such as ability to perform supervisory tasks has yet to be satisfactorily answered. Certainly, the supervisory motivation-performance link has yet to be examined in depth to establish the nature of the relationship. Measurement, unfortunately, appears to be one of the major retarding influences in such research. An academically and organisationally acceptable and reliable measure of supervisory performance remains to be developed. Many production managers, however, would suggest that a series of regular departmental production results would provide sufficient evidence for the assessment of the work performance of production supervisors. Such measures would include variance information concerning utilisation of resources within the supervisor's department or section which is readily available on a regular basis. It does not concern behaviour per se, but the results of supervisory behaviour in its effect upon departmental production performance. The risk in adopting such a measure in research is that it becomes less recognisable as an acceptable academic instrument for measuring or even reflecting individual performance. After all, the information mentioned above refers to the results of a group effort, a group work performance. Many managers in the operations function have suggested, however, that they would expect superior or above-average performers at a supervisory

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level to achieve superior or above average results in the departmental production results. The arguments against using such data would be those which could equally be addressed to existing questionnaire or interview-type data. They can be "fixed" or "fiddled", some people can "cheat", and prompts such questions as "does the data reflect the existence of, and differences in, that criterion with which the research is concerned?" It is not beyond the skills of the competent supervisor to obtain superior labour or material yield (or utilisation) results (measured against some "standard" required value) for a period of time. It is much simpler to 'inaccurately' complete a self-rating questionnaire or exhibit 'effective' behaviour only whilst researchers are observing.

Once it can be established that poor performance levels amongst supervisors are commonly found to exist, then it becomes appropriate to examine the individual/role "match". That is, how does the individual match up to the requirements of the role (which ideally, as Child explains, have been previously clarified and defined)? Does he have, or can he acquire, the necessary skills, abilities and knowledge, required for successful fulfillment of the supervisor's role? Certainly, the apparent success of the German 'Meister' model may lie in the successful matching between the individual's education and training and other personal characteristics, and the requirements of the supervisory role.

The results of this study found that the two main elements most often referred to as motivational influences to be, firstly, issues which can be subsumed under the general heading of interpersonal relationships, and secondly, job satisfaction. Six significant associations between job motivation and other variables were identified. They were the relationship between job motivation and the relationships between supervisor and boss, the quality of communicating relationship, supervisors need for clarity, job satisfaction and role ambiguity. The elements described above, therefore, which were derived from analysis of interview data, tend to

support those generated by statistical analysis of the questionnaire data. Those supervisors who rated their communicating relationship with their boss and their overall relationship with him as high, tended to have higher levels of motivation than those with low ratings of both variables. As job satisfaction is statistically associated with job motivation, and the major source of satisfaction (and its converse, dissatisfaction) being the successful achievement of production tasks, then a link between successful task achievement, satisfaction and job motivation likely exists. The relationship between non-achievement of the production tasks - dissatisfaction - and reduced levels of motivation is, however, a subject for further study. The rankings of criteria for effective supervision by both supervisors and managers indicate a measure of agreement not shown in the respective rankings of the importance of certain task elements in the supervisory role. Not surprisingly then, this study identifies some uncertainty on the part of supervisors concerning the methods used by managers to evaluate supervisory performance. The opportunity does exist for the supervisor to have a close agreement with his manager concerning the criteria for effective supervision in conceptual terms yet many fail to achieve a superior performance rating from his superior as they disagree over the most important task element in the supervisory role.

Supervisory training activities have been examined and the attitudes of supervisors to the value and usefulness of training events evaluated. There is evidence to suggest that whilst many supervisors view supervisory training positively, the overall pattern of responses concerning the usefulness of training is mixed. Many supervisors refer to the failure of training events to provide "tools" which can be directly applied to their work situation. A common attitude amongst supervisors is that the attempt to teach "successful" or "effective" supervisory behaviour is not

worthwhile. The comment "you either have it or not, and no amount of training will help" sums up the feeling of many that supervisory skills are developed prior to the individual assuming the supervisory role, that is often through his experiential learning as a member of the shop floor work group. The objectives of some supervisory training activities are described as "developmental" and that they are concerned with enhancing existing supervisory skills and knowledge either to improve current supervisory performance or prepare individuals for managerial positions. The value of the former objective, from the viewpoint of the supervisors, is in doubt judging from the results of discussions with supervisors. The latter objective too, appears to be of debatable value in that only a small minority of supervisors in the study expressed a desire to achieve positions in the formal managerial hierarchy. Perhaps a beneficial training design would include supervisors and their immediate superiors working together on work-related problem-solving. Other activities are equally valid but the main objective of such a training event would be to improve the working relationship between supervisor and superior, bearing in mind the influence that interpersonal relationships, particularly with the supervisor's superior, have upon the work attitudes of supervisors as suggested by the results of this study.

The supervisory selection criteria defines one subject area where supervisors and managers were largely in agreement. The three criteria common to both supervisory and managerial groups concerning which there was general agreement were (in rank order), a detailed knowledge of products and production processes (normally gained through first hand experience working with the shop floor work group), the ability to handle/manage men, and problem-solving ability. This can be seen as perhaps the initial stages of the definition of the skills, abilities and knowledge required by perspective supervisors with the assumption that "effective" supervisors possess them.

Recruitment and selection of subordinates was an issue towards which supervisors often expressed strong attitudes. Many felt that they should have some involvement in the selection of new shop floor workers who were recruited to work in the supervisor's section or department. Currently, the practise of most organisations precludes the participation of supervisors in this process which many supervisors view as less than effective, using their judgement of the quality of "new starters" as their basis for evaluation. The existing process usually involves initial screening interviews by personnel specialists and often the final decision remaining at the level of departmental manager. The suggestion that supervisors may be practically involved in that decision-making process may have a two-fold beneficial effect. Firstly, it may improve the supervisor's involvement in introducing training and integrating the new employee into the work environment of his department or section and the supervisor is more likely to ensure that the subordinate's performance reaches acceptable standards. Secondly, the supervisor's feelings of status may be enhanced as he will perhaps feel that some of his supervisor's decision-making power has been devolved to him.

In addition to the two potential benefits described above, the quality of the final decision may even be improved by the supervisor's participation in the process. Here again, there is an example of an opportunity for managers to influence the tasks comprising supervisor's role and thereby perhaps also the work attitudes which he holds. The opportunity does, however, imply some loss or sharing of decision-making power which managers may or may not be prepared to sacrifice for the potential benefits described above. As Abhoud and Richardson (1978) describe in their study the following comment appears equally relevant here: "Such a finding suggests that an important starting point in

designing a programme to make supervision (more) effective is not changing the behaviour of first-level supervisors but convincing those who manage them to yield some control".

A further area of potentially fruitful research may lie in the investigation of the task achievement - satisfaction - motivation relationship. In this study the important value of achieving production tasks has been identified in its influence upon supervisory work attitudes. If there is a close association between supervisory and department/section performance as some supervisors suggest, then the degree of departmental production task achievement may be reflected in supervisory work attitudes. The measurement of task achievement could be performed by employing the regular production performance data (e.g. variance reports) communicated to each department or section. It would be valuable to examine this relationship over several time periods where the degree of achievement of the production tasks varied sufficiently.

Descriptive terms which have been applied to supervisors by managers in the study included "apathetic", "complacent", "despondent", "lethargic", "idle", and "switched off". If the major problem with supervisors is, as has been suggested by managers commenting in the study, the motivation of their supervisors, the potential solutions may lie in the hands of supervisors' managers. The results of this study have, as one manager described "said as much, by implication, about the behaviour and attitude of managers as it does about supervisors". Traditional stereotypes of the supervisor appear to have been, in the main part, confirmed in "hard but fair" styles of supervision, lack of trust feelings towards either managements of trade unions, conservative attitudes, strong beliefs concerning justice, morality and fairness in organisational life. One of the most common observations

made during the fieldwork phase of the research was the regularity with which supervisors referred to the sources of problems or failures being the responsibility of other individuals in the organisation. This is a risk of collecting and analysing data from interviews with subjects, that is, the practise of displacement of the responsibility for mistakes at work. On the credit side of the research account, the characteristics of realism and proximity to the data source are hard to duplicate using alternative research methods.

From an organisational viewpoint the power to change elements within the supervisory role, assuming that change is appropriate, lies with the manager. Several organisations which have participated in the study expressed an interest in receiving data which would be useful in the decision concerning how the supervisory role should change. The suggestion that some influencing or decision-making power may have to be devolved to supervisors in order to achieve the role development mentioned earlier, may not be an attractive proposal to many managers despite the potential organisational benefit that may be derived.

APPENDIX 1

SUPERVISORY QUESTIONNAIRE

SUPERVISORY QUESTIONNAIRE

On the following pages you will find questions about your job.

Instructions are given at the beginning of each section, please read them carefully and try and work through the questionnaire as quickly as you can as soon after the interview as possible.

As I mentioned at the end of the interview there are only two types of answer, honest and less honest. If you are considering the latter, please do not complete the questionnaire.

There are no "trick" questions and your answers will be kept strictly confidential.

This questionnaire represents an important part of my current research, so please answer each question as honestly as you can. The questionnaire will take you about 25 minutes to complete, when you have done so please return it in the pre-paid envelope provided.

Thank you very much for your cooperation.

If you have any questions about this questionnaire, or the research in general, please contact:

Tony Chapman
Cranfield School of Management
Cranfield
Bedfordshire
MK43 0AL
Tel: 0234-751122 X279

BACKGROUND INFORMATIONCARD 1
col 1

NAME: _____

AGE: _____

SEX: Male/Female (delete as appropriate)

PLANT (Name): _____

DEPARTMENT: _____

NUMBER OF YEARS IN PRESENT APPOINTMENT: _____

PREVIOUS POSITION: JOB TITLE: _____

DEPARTMENT: _____

PLANT (Name): _____

NUMBER OF YEARS IN PREVIOUS POSITION: _____

NUMBER OF SUBORDINATES WHO CURRENTLY REPORT DIRECTLY TO
YOU: _____

NAME OF YOUR CURRENT BOSS (WHO YOU REPORT TO): _____

SECTION 1: NEED FOR CLARITY

Below are four questions concerning your job. Please choose one answer from the five alternatives given. For example, if, in response to Question 1, you feel it is not at all important for you to know, in detail, what you have to do on a job, you would write number 1 in the box provided at the end of Question 1.

Choose one response, which reflects your own view, from the following list and write its number in the box after the question.

<i>Not at all important</i>	<i>Slightly important</i>	<i>Moderately important</i>	<i>Very important</i>	<i>Extremely important</i>
1	2	3	4	5

1. How important is it to you to know, in detail, what you have to do on a job? ☐
2. How important is it to you to know, in detail, how you are supposed to do a job? ☐
3. How important is it to you to know, in detail, what the limits of your authority on a job are? ☐
4. How important is it to you to know how well you are doing on your job? ☐

SECTION 2: ROLE AMBIGUITY

In this section you are asked to indicate the degree to which the conditions described in the 14 statements below exist for you in your job. The alternative responses from which you may choose (and indicate by placing the number of the response in the box at the end of each statement) are as follows:

<i>Very true</i>	<i>Moderately true</i>	<i>Neutral (Sometimes true, sometimes false)</i>	<i>Moderately False</i>	<i>Very False</i>
1	2	3	4	5

For example, if you feel that it is very true that you are certain about how much authority you have in your job (statement 1 below), you should write a 1 in the box provided after the statement.

1. I feel certain about how much authority I have. ☐
2. I have clear planned goals and objectives for my job ☐
3. There is a lack of policies and guidelines to help me in my job. ☐
4. I am corrected or praised when I really don't expect it. ☐
5. I know that I have planned my time at work properly. ☐
6. I know what my responsibilities are. ☐
7. I have to "feel my way" in performing my duties. ☐
8. I feel certain as to how I will be evaluated for a raise or a promotion. ☐
9. I know exactly what is expected of me. ☐
10. I am uncertain as to how my job fits in with other jobs in the company. ☐
11. I am told how well I am doing in my job. ☐

12. Explanation is clear of what has to be done in my job. ☐
13. I have to work under vague directives or orders/instructions. ☐
14. I do not know if my work will be acceptable to my boss. ☐

SECTION 3JOB MOTIVATION SCALE

Please respond to each statement by placing the appropriate number in the box. The alternative responses from which you may choose (and indicate by writing the number of the response in the box at the end of each statement) are as follows:

1	2	3	4	5
NEVER	RARELY	SOMETIMES	FREQUENTLY	ALWAYS

Remember your answers will be treated in strictest confidence, so please be as honest as you can.

1. I do expend a lot of energy in my work. ☐
2. I put off till tomorrow what I could finish today. ☐
3. I waste time at work. ☐
4. I am alert and on my toes at work. ☐
5. I feel that there is no job that is too hard for me. ☐
6. I do other things with more enthusiasm than my job at work. ☐
7. I don't work as hard as I can on a job. ☐
8. I put a lot of effort into a job even when I know a little will do. ☐
9. I work harder than most people here. ☐
10. I work no harder than the minimum required. ☐
11. I do work that isn't strictly in my job (e.g. staying late, taking work home). ☐
12. I put a lot of energy into all the jobs I do at work. ☐
13. I feel exhausted, mentally and physically, after a day's work here. ☐

14. I work harder than anyone else here. ☐
15. I put more energy into my hobbies and my home life than I put into my work here. ☐
16. I could put more effort into a job if I tried. ☐

SECTION 4: TASK RATING FORM

For each of the following activities, please place the number corresponding to its importance for your job in the box provided.

<i>Not at all important</i>	<i>Slightly important</i>	<i>Moderately important</i>	<i>Very important</i>	<i>Extremely important</i>
---------------------------------	-------------------------------	---------------------------------	---------------------------	--------------------------------

1

2

3

4

5

5

- | | |
|--|--------------------------|
| 1. Informing employees of levels of performance expected. | <input type="checkbox"/> |
| 2. Instructing employees in safe working habits. | <input type="checkbox"/> |
| 3. Ensuring safety equipment is used. | <input type="checkbox"/> |
| 4. Instructing employees in the proper use of materials and equipment. | <input type="checkbox"/> |
| 5. Observing subordinates' work activities. | <input type="checkbox"/> |
| 6. Listening to employees' ideas and problems. | <input type="checkbox"/> |
| 7. Settling disciplinary problems or potential grievances. | <input type="checkbox"/> |
| 8. Talking with other supervisors/foreman in other departments about levels of production. | <input type="checkbox"/> |
| 9. Scheduling overtime. | <input type="checkbox"/> |
| 10. Shifting/transferring people to other jobs to maintain production levels. | <input type="checkbox"/> |
| 11. Establishing priorities on "down" equipment. | <input type="checkbox"/> |
| 12. Assigning employees to specific jobs. | <input type="checkbox"/> |
| 13. Consulting off-going supervisors about shift conditions. | <input type="checkbox"/> |
| 14. Reading records of previous shifts' activities and planning production levels for shift. | <input type="checkbox"/> |
| 15. Completing reports on shift conditions at the end of the shift. | <input type="checkbox"/> |

16. Checking quality of production.
17. Finding causes of low production or poor quality.
18. Determining production levels.
19. Determining quantity, kinds, and causes of waste.
20. Encouraging/obtaining suggestions from subordinates regarding improvements in work methods.
21. Communicating Health and Safety at Work Act regulations to workers.
22. Checking to see that walkways and fire exits are clear.
23. Completing maintenance records.
24. Inspecting work areas for cleanliness.
25. Diagnosing problems with machines.
26. Adjusting machines.
27. Checking maintenance work when completed.
28. Inspecting machines for proper working order.
29. Setting-up machines.
30. Compiling miscellaneous reports.
31. Distributing tools/equipment/materials.
32. Keeping personal record of job incidents.
33. Performing routine checks on safety devices.
34. Notifying employees of schedule changes.

16. Checking quality of production. ☐
17. Finding causes of low production or poor quality. ☐
18. Determining production levels. ☐
19. Determining quantity, kinds, and causes of waste. ☐
20. Encouraging/obtaining suggestions from subordinates regarding improvements in work methods. ☐
21. Communicating Health and Safety at Work Act regulations to workers. ☐
22. Checking to see that walkways and fire exits are clear. ☐
23. Completing maintenance records. ☐
24. Inspecting work areas for cleanliness. ☐
25. Diagnosing problems with machines. ☐
26. Adjusting machines. ☐
27. Checking maintenance work when completed. ☐
28. Inspecting machines for proper working order. ☐
29. Setting-up machines. ☐
30. Compiling miscellaneous reports. ☐
31. Distributing tools/equipment/materials. ☐
32. Keeping personal record of job incidents. ☐
33. Performing routine checks on safety devices. ☐
34. Notifying employees of schedule changes. ☐

SECTION 5: COMMUNICATION

Please answer these questions as accurately as you can in terms of describing your own behaviour at work. Tick the box which you feel comes closest to your own answer.

1. How often should you communicate with your immediate boss?

<i>2 or 3 times/month</i>	<i>About once per week</i>	<i>Several times/week</i>	<i>About once a day</i>	<i>Regularly through the day</i>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. How often do you communicate with your immediate boss?

<i>2 or 3 times/month</i>	<i>About once per week</i>	<i>Several times/week</i>	<i>About once a day</i>	<i>Regularly through the day</i>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. To what extent is the information you receive from your immediate boss:

	<i>To a very little extent</i>	<i>To some extent</i>	<i>To a very great extent</i>
(i) <i>Timely</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(ii) <i>Trustworthy</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(iii) <i>Useful</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(iv) <i>Adequate</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. How do you rate the relationship you have with your immediate boss:

<i>Not at all good</i>	<i>Not good</i>	<i>Reasonable</i>	<i>Quite Good</i>	<i>Extremely good</i>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SECTION 6 : JOB SATISFACTION

Please tick the box which comes nearest to your own response to each question.

	<i>To a very little extent</i>		<i>To some extent</i>		<i>To a very great extent</i>
1. <i>To what extent do you like your work?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. <i>To what extent would you feel tempted to take another job if you found one that paid the same as your current job?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. <i>To what extent do you ever feel you would rather stay away from the job than come in?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. <i>To what extent do you experience dissatisfaction in your job?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. <i>To what extent do you experience satisfaction in your job?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. <i>To what extent do you feel your job comes up to your expectations of it?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. <i>To what extent do you feel able to recommend your job to other people?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Thank you for your time and effort in completing this questionnaire.

Please check through to see if you have missed any questions and return to me in the prepaid envelope attached.

APPENDIX 2

MANAGER'S QUESTIONNAIRE

TASK RATING FORM

For each of the following activities, please place the number corresponding to its importance in your supervisor's job in the box provided.

<i>Not at all important</i>	<i>Slightly important</i>	<i>Moderately important</i>	<i>Very important</i>	<i>Extremely important</i>
---------------------------------	-------------------------------	---------------------------------	---------------------------	--------------------------------

1	2	3	4	5
---	---	---	---	---

5

- | | |
|--|--------------------------|
| 1. Informing employees of levels of performance expected. | <input type="checkbox"/> |
| 2. Instructing employees in safe working habits. | <input type="checkbox"/> |
| 3. Ensuring safety equipment is used. | <input type="checkbox"/> |
| 4. Instructing employees in the proper use of materials and equipment. | <input type="checkbox"/> |
| 5. Observing subordinates' work activities. | <input type="checkbox"/> |
| 6. Listening to employees' ideas and problems. | <input type="checkbox"/> |
| 7. Settling disciplinary problems or potential grievances. | <input type="checkbox"/> |
| 8. Talking with other supervisors/foreman in other departments about levels of production. | <input type="checkbox"/> |
| 9. Scheduling overtime. | <input type="checkbox"/> |
| 10. Shifting/transferring people to other jobs to maintain production levels. | <input type="checkbox"/> |
| 11. Establishing priorities on "down" equipment. | <input type="checkbox"/> |
| 12. Assigning employees to specific jobs. | <input type="checkbox"/> |
| 13. Consulting off-going supervisors about shift conditions. | <input type="checkbox"/> |
| 14. Reading records of previous shifts' activities and planning production levels for shift. | <input type="checkbox"/> |
| 15. Completing reports on shift conditions at the end of the shift. | <input type="checkbox"/> |

16. Checking quality of production.
17. Finding causes of low production or poor quality.
18. Determining production levels.
19. Determining quantity, kinds, and causes of waste.
20. Encouraging/obtaining suggestions from subordinates regarding improvements in work methods.
21. Communicating Health and Safety at Work Act regulations to workers.
22. Checking to see that walkways and fire exits are clear.
23. Completing maintenance records.
24. Inspecting work areas for cleanliness.
25. Diagnosing problems with machines.
26. Adjusting machines.
27. Checking maintenance work when completed.
28. Inspecting machines for proper working order.
29. Setting-up machines.
30. Compiling miscellaneous reports.
31. Distributing tools/equipment/materials.
32. Keeping personal record of job incidents.
33. Performing routine checks on safety devices.
34. Notifying employees of schedule changes.

APPENDIX 3

RESULTS OF KRUSKAL-WALLIS ONE-WAY
ANALYSIS OF VARIANCE TEST ON PILOT
STUDY SAMPLE (3 GROUPS) ACROSS THE
VARIABLES :

NUMBER OF SUBORDINATES
NUMBER OF YEARS AS FOREMAN
AGE OF FOREMAN
DISCREPANCY IN FOREMAN'S ROLE PERCEPTIONS
JOB MOTIVATION
JOB SATISFACTION
QUALITY OF COMMUNICATING RELATIONSHIP WITH BOSS
NEED FOR CLARITY
RELATIONSHIP WITH BOSS
ROLE AMBIGUITY

APPENDIX 3.0

KRUSKAL-WALLIS ONE-WAY ANALYSIS OF VARIANCE TEST ACROSS THE VARIABLES NUMBER OF SUBORDINATES (NOSUBS) AND PILOT STUDY SUPERVISORY SAMPLE GROUP (GROUP) (N = 58)

NOSUBS BY GROUP	NO OF SUBORDINATES NO OF CASE			CORRECTED FOR TIES CHI-SQUARE SIGNIFICANCE
	1	2	3	
GROUP NUMBER	23	21	14	
MEAN RANKS	27.94	27.62	33.54	
CASES	58	1.142	0.565	1.144
				0.564

APPENDIX 3.1

KRUSKAL-WALLIS ONE-WAY ANALYSIS OF VARIANCE TEST ACROSS THE VARIABLES NUMBER OF YEARS AS FOREMAN (YRSFMAN) AND PILOT STUDY SUPERVISORY SAMPLE GROUP (GROUP) (N = 58)

YRSFMAN		NO OF YRS AS FMAN			
BY GROUP		NO OF CASE			
GROUP	1	2	3		
HUMBER	23	21	14		
MEAN RANKS	26.63	33.14	26.50		
CASES	58	CHI-SQUARE	SIGNIFICANCE	CHI-SQUARE	SIGNIFICANCE
		2.072	0.355	2.085	0.353
				CORRECTED FOR TIES	

APPENDIX 3.2

KRUSKAL-WALLIS ONE-WAY ANALYSIS OF VARIANCE TEST ACROSS THE VARIABLES AGE OF FOREMAN (AGE) AND PILOT STUDY SUPERVISORY SAMPLE GROUP (GROUP) (N = 58)

AGE BY GROUP	AGE OF FMAN NO OF CASE			CORRECTED FOR TIES CHI-SQUARE SIGNIFICANCE	
	GROUP NUMBER	1	2	3	
		23	21	14	
MEAN RANKS		25.19	33.31	29.08	
CASES	58				
			2.682	0.262	2.690
					0.261

APPENDIX 3.3

KRUSKAL-WALLIS ONE-WAY ANALYSIS OF VARIANCE TEST ACROSS THE VARIABLES DISCREPANCY IN FOREMANS ROLE PERCEPTIONS (DROLPER) AND PILOT STUDY SUPERVISORY SAMPLE GROUP (GROUP) (N = 58)

DISCREP IN FMANS ROLE PERCEPTIONS
BY GROUP NO OF CASE

GROUP	1	2	3
NUMBER	23	21	14
MEAN RANKS	23.29	38.64	23.54

CASES	CHI-SQUARE	SIGNIFICANCE	CORRECTED FOR TIES
58	11.224	0.004	CHI-SQUARE SIGNIFICANCE
			11.243 0.004

APPENDIX 3.4

KRUSKAL-WALLIS ONE-WAY ANALYSIS OF VARIANCE TEST ACROSS THE VARIABLES JOB MOTIVATION
(JOBMOT) AND PILOT STUDY SUPERVISORY SAMPLE GROUP (GROUP) (N = 58)

JOBMOT		JOB MOTIVATION			
BY GROUP		NO OF CASE			
GROUP NUMBER	1	23	2	21	3
MEAN RANKS	26.10	36.64	21.42		
CASES	58				
		CHI-SQUARE	SIGNIFICANCE		
		7.688	0.021		
				CORRECTED FOR TIES	
				CHI-SQUARE	SIGNIFICANCE
				7.825	0.020

APPENDIX 3.5

KRUSKAL-WALLIS ONE-WAY ANALYSIS OF VARIANCE TEST ACROSS THE VARIABLES JOB SATISFACTION (JOBSAT) AND PILOT STUDY SUPERVISORY SAMPLE GROUP (GROUP) (N = 58)

JOBSAT		JOB SATISFACTION			
BY GROUP		NO OF CASE			
GROUP NUMBER MEAN RANKS	1 23 20.46	2 21 32.55	3 14 23.88		
				CASES	58
				CHI-SQUARE	2.129
				SIGNIFICANCE	0.345
				CORRECTED FOR TIES	
				CHI-SQUARE	2.148
				SIGNIFICANCE	0.342

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APPENDIX 3.6

KRUSKAL-WALLIS ONE-WAY ANALYSIS OF VARIANCE TEST ACROSS THE VARIABLES QUALITY OF COMMUNICATION
RELATIONSHIP (QUALCOM) AND PILOT STUDY SUPERVISORY SAMPLE GROUP (GROUP) (N = 58)

QUALCOM.		QUALITY OF COMMN RELATIONSHIP		
BY GROUP.		NO OF CASE		
GROUP	NUMBER	1	2	3
		23	21	14
MEAN RANKS		28.38	28.95	30.33
CASES	CHI-SQUARE	SIGNIFICANCE	CORRECTED FOR TIES	
58	0.112	0.946	CHI-SQUARE	SIGNIFICANCE
			0.113,	0.945

APPENDIX 3.7

KRUSKAL-WALLIS ONE-WAY ANALYSIS OF VARIANCE TEST ACROSS THE VARIABLES NEED FOR CLARITY (NCLARITY) AND PILOT STUDY SUPERVISORY SAMPLE GROUP (GROUP) (N = 58)

NCLARITY BY GROUP		NEED FOR CLARITY NO OF CASE			
GROUP		1	2	3	
NUMBER		23	21	14	
MEAN RANKS		26.54	33.79	25.54	
CASES		58			
			CHI-SQUARE	SIGNIFICANCE	CORRECTED FOR TIES
			2.793	0.247	2.847
					0.241

APPENDIX 3.8

KRUSKAL-WALLIS ONE-WAY ANALYSIS OF VARIANCE TEST ACROSS THE VARIABLES RELATIONSHIP WITH BOSS (RELNBOB) AND PILOT STUDY SUPERVISORY SAMPLE GROUP (GROUP) (N = 58)

RELBOS BY GROUP	COMMREL. WITH BOSS NO OF CASE	CORRECTED FOR TIES		
		CHI-SQUARE	SIGNIFICANCE	
GROUP	1	2	3	
NUMBER	23	21	14	
MEAN RANKS	31.67	24.14	32.17	
CASES	58	2.855	0.240	
		3.157	0.206	

APPENDIX 3.9

KRUSKAL-WALLIS ONE-WAY ANALYSIS OF VARIANCE TEST ACROSS THE VARIABLES ROLE AMBIGUITY (ROLAMB) AND PILOT STUDY SUPERVISORY SAMPLE GROUP (GROUP) (N = 58)

ROLAMB		NO OF CASE			
BY GROUP					
GROUP NUMBER MEAN RANKS	1	2	3	CASI- SQUARE	SIGNIFICANCE
	23	21	14		
	34.33	23.12	28.63		
CASES	58				
		5.120	0.077		
				CORRECTED FOR TIES	
				CHI-SQUARE	SIGNIFICANCE
				5.140	0.077

APPENDIX 4

RESULTS OF KRUSKAL-WALLIS ONE-WAY

ANALYSIS OF VARIANCE TEST - ON.

MAIN STUDY SAMPLE (6 GROUPS) ACROSS

THE VARIABLES:

NUMBER OF SUBORDINATES

NUMBER OF YEARS AS FOREMAN

AGE OF FOREMAN

DISCREPANCY IN FOREMAN'S ROLE PERCEPTIONS

JOB MOTIVATION

JOB SATISFACTION

QUALITY OF COMMUNICATING RELATIONSHIP WITH BOSS

NEED FOR CLARITY

RELATIONSHIP WITH BOSS

ROLE AMBIGUITY

APPENDIX 4.0

KRUSKAL-WALLIS ONE-WAY ANALYSIS OF VARIANCE TEST ACROSS THE VARIABLES, NUMBER OF SUBORDINATES (NOSUBS) AND MAIN STUDY SUPERVISORY SAMPLE GROUP (GROUP). (N = 67)

[illegible]

KRUSKAL-WALLIS ONE-WAY ANALYSIS OF VARIANCE TEST ACROSS THE VARIABLES, NUMBER OF YEARS AS FOREMAN (YRSFMAN) AND MAIN STUDY SUPERVISORY SAMPLE GROUP (GROUP). (N = 67)

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APPENDIX 4.2

((AGE) AND MAIN STUDY SUPERVISORY SAMPLE GROUP (GROUP)). (N = 67)

AGE	AGE OF FMAN
BY GROUP	NO OF CASE
GROUP	1
NUMBER	21
MEAN RANKS	36.14
	2
	7
	33.21
	3
	10
	26.50
	4
	9
	32.44
	5
	11
	33.82
	39.72
	CORRECTED FOR TIES
CASES	CHI-SQUARE SIGNIFICANCE
67	2.581
	0.764
	2.585
	0.764

APPENDIX 4.3

KRUSKAL-WALLIS ONE-WAY ANALYSIS OF VARIANCE TEST ACROSS THE VARIABLES, DISCREPANCY IN FOREMANS ROLE PERCEPTIONS (DROLPER) AND MAIN STUDY SUPERVISORY SAMPLE GROUP (GROUP).
(N = 67).

DROLPER		DISCREP IN FMANS ROLE PERCEPTIONS					
BY GROUP		NO OF CASE					
GROUP	1	2	3	4	5	6	
NUMBER	21	7	10	9	11	9	
MEAN RANKS	37.12	33.14	39.65	20.50	36.95	31.00	
CASES		CHI-SQUARE	SIGNIFICANCE	CORRECTED FOR TIES			
67		6.179	0.289	CHI-SQUARE SIGNIFICANCE			
				6.190			
				0.288			

APPENDIX 4.4

KRUSKAL-WALLIS ONE-WAY ANALYSIS OF VARIANCE TEST ACROSS THE VARIABLES, JOB MOTIVATION (JOBMOT)
AND MAIN STUDY SUPERVISORY SAMPLE GROUP (GROUP). (N = 67)

JOB MOTIVATION		BY GROUP	
NO OF CASE		GROUP	
1	2	3	4
21	7	10	9
30.45	25.14	40.40	34.17
			36.44
			38.45
			11
			5
			6
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			36.44
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			9
			36.44
			38.45
			11
			5
			6
			9
			36.44
			38.45
			11
			5

APPENDIX 4.5

KRUSKAL-WALLIS ONE-WAY ANALYSIS OF VARIANCE TEST ACROSS THE VARIABLES, JOB SATISFACTION (JOBSAT) AND MAIN STUDY SUPERVISORY SAMPLE GROUP (GROUP). (N = 67)

JOBSAT BY GROUP	JOBSAT NO OF CASE						
GROUP	1	2	3	4	5	6	
NUMBER	21	7	10	9	11	9	
MEAN RANKS	40.19	15.79	33.05	29.44	34.05	39.28	
CASES		CHI-SQUARE	SIGNIFICANCE	CORRECTED FOR TIES		CHI-SQUARE	SIGNIFICANCE
67		9.412	0.094	9.488		0.091	

APPENDIX 4.6

KRUSKAL-WALLIS ONE-WAY ANALYSIS OF VARIANCE TEST ACROSS THE VARIABLES, QUALITY OF COMMUNICATION
RELATIONSHIP (QUALCOM) AND MAIN STUDY SUPERVISORY SAMPLE GROUP (GROUP). (N = 67)

QUALCOM BY GROUP	QUALIT OF COMMN RELATIONSHIP NO OF CASE					
GROUP	1	2	3	4	5	6
NUMBER	21	7	10	9	11	9
MEAN RANKS	33.00	28.57	34.80	29.28	35.36	42.72
						CORRECTED FOR TIES
CASES	67	CHI-SQUARE	SIGNIFICANCE	CHI-SQUARE	SIGNIFICANCE	
		3.001	0.700	3.050	0.692	

APPENDIX 4.7

KRUSKAL-WALLIS ONE-WAY ANALYSIS OF VARIANCE TEST ACROSS THE VARIABLES, NEED FOR CLARITY (NCLARITY) AND MAIN STUDY SUPERVISORY SAMPLE GROUP (GROUP). (N = 67)

NCLARITY		NEED FOR CLARITY			
BY GROUP		NO OF CASE			
GROUP	1	2	3	4	5
NUMBER	21	7	10	9	11
MEAN RANKS	30.48	29.50	42.35	40.17	33.14
					31.33
CASES		CHI-SQUARE		CORRECTED FOR TIES	
67		3.988		CHI-SQUARE SIGNIFICANCE	
				4.169	
				0.525	

APPENDIX 4.8

KRUSKAL-WALLIS ONE-WAY ANALYSIS OF VARIANCE TEST ACROSS THE VARIABLES, RELATIONSHIP WITH BOSS (RELNBOS) AND MAIN STUDY SUPERVISORY SAMPLE GROUP (GROUP). (N = 67)

RELNBOS BY GROUP	REL WITH BOSS NO OF CASE				
GROUP NUMBER	1	2	3	4	5
	21	7	10	9	11
MEAN RANKS	34.36	34.86	41.95	32.17	30.86
					29.33
CASES	67				
		CHI-SQUARE	SIGNIFICANCE	CORRECTED FOR TIES	
		2.566	0.766	CHI-SQUARE	SIGNIFICANCE
				2.950	0.708

KRUSKAL-WALLIS ONE-WAY ANALYSIS OF VARIANCE TEST ACROSS THE VARIABLES, ROLE AMBIGUITY (ROLAMB) AND MAIN STUDY SUPERVISORY SAMPLE GROUP (GROUP): (N = 67)

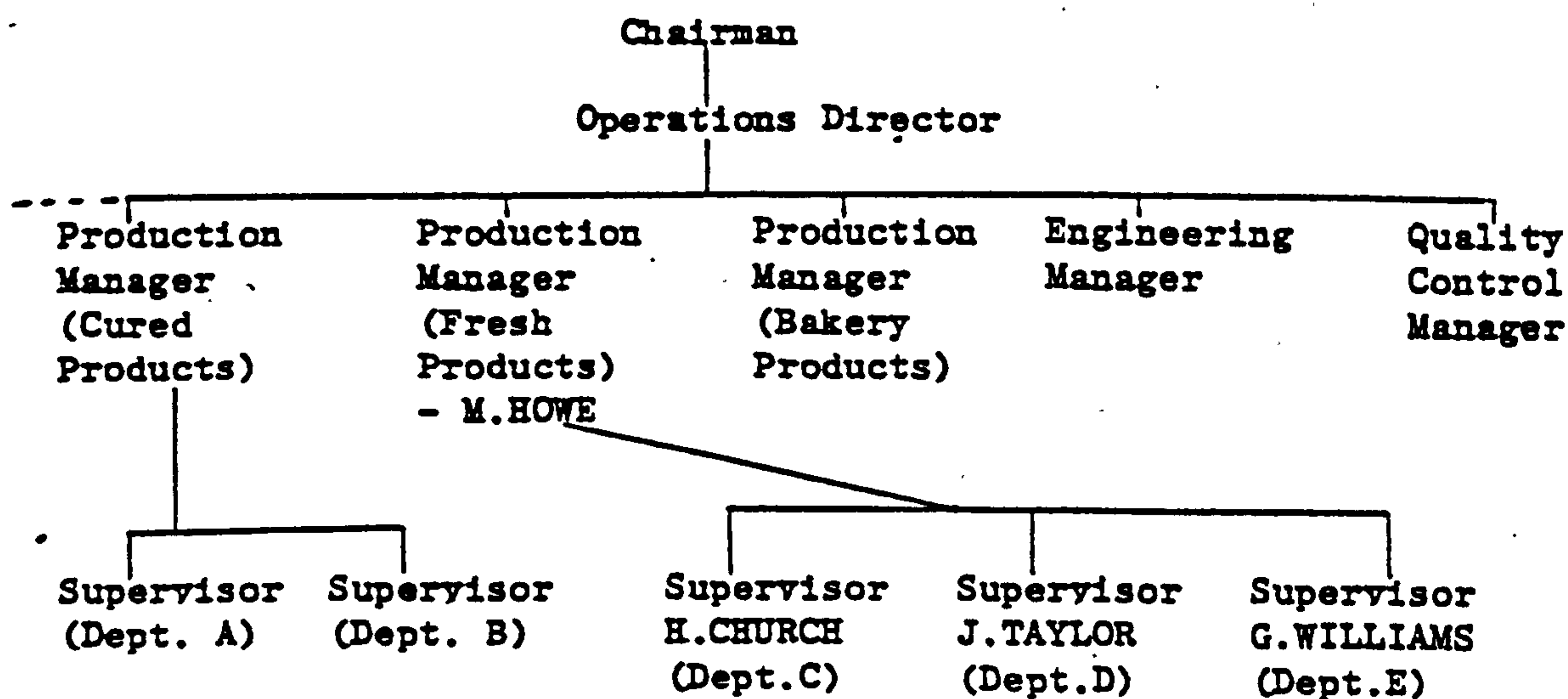
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APPENDIX 5INTEGRATED CASE STUDY/ROLE PLAYEXERCISE: MONTHLY MEETINGGeneral Background

The attached exercise simulates a monthly production meeting attended by Malcolm Howe, Production Manager at Porky Products Ltd., (a division of Midlands Foods Ltd.), and the three supervisors who report directly to him - Harry Church, John Taylor, and Graham Williams.

Porky Products is a meat products manufacturer based in Ealing, London. The company comprises a single plant employing 600 people in total; the split between direct and indirect labour being in the ratio of 2:1.

The structure of the factory organisation is described below.

Porky Products Factory Organisation

The exercise focuses upon the Production Manager (fresh products), Malcolm Howe and his three supervisors who are responsible for departments C,D and E. These departments represent the preparation, production and packaging operations, respectively, of all fresh meat products manufactured by the company.

The current recession has initiated a policy of consolidation within the company and the Chairman of Porky Products (in consultation with his superiors on the Midlands Foods Board) has briefed all his production managers on this subject. The most significant element of the Chairman's briefing was that managers should concentrate on reducing costs through improved utilisation of labour, materials and plant whilst continuing to improve product quality and employee relations.

The company (established 1786 by Mr. H. Hogg) to date has enjoyed excellent industrial relations which is reflected in the minority union membership (less than 30%) at the factory. It has maintained a family atmosphere despite being taken over by Midlands Foods in 1958. This situation has been achieved largely by the presence of at least one member of the Hogg family on the Board of Porky Products since the takeover and also the relatively small size of the factory.

The production processes are labour intensive but, of late, new automated machinery has been introduced with subsequent redundancies. In the fresh products production department the work flow moves from C to D to E, the final product of C department becoming the raw material for department D and so on.

EXERCISE: MONTHLY MEETINGRole Brief: Manager - Malcolm Howe

You are Malcolm Howe, 31, a Production Manager with 5 years production experience in the food industry. You are about to attend the third monthly production meeting which is part of a system introduced by you when you joined the company three months ago. You have three supervisors reporting to you, each of whom is responsible for one department within the fresh products manufacturing group.

You feel you are a "professional" manager with a sound technical knowledge of products, process, management techniques, and man-management ability. You want to make your mark in this company so that you may move to a more senior position within the parent group, Midlands Foods. You feel that these meetings are valuable because your supervisors and yourself exchange ideas and information about production related issues. Since you have joined the company the Chairman has made it clear to you your main objectives should be to:

- Reduce labour costs over 3 years by 10% through increased efficiency and productivity.
- Encourage supervisors' commitment and feelings of membership to the management team.
- Improve discipline on the shop floor.
- Improve product quality.

Your own ideas include the delegation of many routine decisions to your supervisors. However, you realise that increasing commitment and encouraging "team" feelings will not be easy, especially as John and Harry are quite resistant to change and suspicious of management. Graham, although easier to manage, may not be capable of taking

much more responsibility, bearing in mind his poor performance recently.

You know there will be issues the supervisors will raise in the meeting but to date these have been, you feel, relatively petty.grievances which you can settle quite quickly.

You feel you need to be quite tough with your supervisors and show them who's boss from time to time. The current situation shows some signs of improvement, but you feel it's too early to pass this on to your supervisors.

Your aims in the meeting are to achieve agreement on your objectives (quality, labour costs, discipline) and generate ideas on how those objectives may be met. In addition, you want to encourage commitment from your supervisors and deal with the supervisors' issues in a manner which is mutually acceptable.

Make a note of how successful you have been in achieving your objectives at the end of the meeting.

EXERCISE: MONTHLY MEETINGRole Brief: Supervisor - John Taylor

You are John Taylor, 58, and you have been a supervisor with the company for 20 years. You have a long experience in the fresh products department and have seen many production managers come and go. You have a poor view of management generally - you have seen them join the company as managers, make a name for themselves, and then move into more senior management positions elsewhere in the group, whilst you have to try and start again with a new manager who wants to change many aspects of the work himself. You have a good relationship with Harry but you think Graham is a creep. Malcolm Howe, your manager, has introduced a system of monthly meetings to improve communication. You feel this is a step in the right direction but it means yet more work for you. You are about to attend the third of these meetings and you have issues you would like to raise.

1. Malcolm has recently cut the manning levels on several lines due to the introduction of less labour intensive machinery. However, you now have less "cover" for absenteeism and this means you are spending more time actually working on the line rather than supervising your subordinates. You want Malcolm to explain how he expects you to do both jobs. You believe you need more labour to cover absenteeism and give you more freedom to supervise.
2. You are concerned about the way discipline is being handled by Malcolm. You feel he's still "wet behind the ears" and this shows itself in his behaviour when disciplining operatives and chargehands on the shop floor. He has, you feel, the annoying habit of verbally disciplining employees in full view of the

shop floor. He is also quick to "blow his top" which you feel is counter-productive. You think this issue is causing discontent amongst operatives on the shop floor and you need to broach this issue during the meeting.

Your overall aim is, as far as possible, to resolve the issues you raise in the meeting. Make a note about how successful you have been in resolving the above issues.

EXERCISE: MONTHLY MEETINGRole Brief: Supervisor - Graham Williams

You are Graham Williams, 35, and you have been a supervisor with the company for 8 years. You are keen to progress into management and always try hard to maintain a good relationship with your manager and perform well in his eyes. Unfortunately, this seems to have been at the expense of your relationship with your fellow supervisors John Taylor and Harry Church who you feel are old fashioned supervisors with little desire to progress within the company.

You are about to attend a regular monthly meeting with your manager and fellow supervisors, Harry and John. This system of monthly meetings was introduced by your manager, Malcolm Howe, at the beginning of the year when he arrived to take up his new position.

The issues you want to raise at the meeting are:-

1. You feel the quality of the product has deteriorated due to the introduction of new automatic machinery. Many managers, especially Malcolm, expect quality to be improved but you know that's almost impossible because the new machines are not capable of the required quality level. Anyway, how can you be expected to monitor and control quality as well as supervise labour? You feel this is the responsibility of the Quality Control department.
2. Your manager, Malcolm, seems to you to rarely appear on the shop floor and even when you try and contact him he's always in meetings. You don't know what goes on in these meetings and you feel he ought to be available when you need him to make a decision. You

often find yourself making decisions on the shop floor which you felt ought to be the responsibility of your manager. In addition, when you do see Malcolm he regularly tells you that the decisions you have made in his absence were incorrect. You want to present this situation to Malcolm in the meeting and achieve a satisfactory outcome for the future.

3. Connected to the above point concerning Malcolm's visibility on the shop floor, you are concerned about feedback of your own performance. You believe the only way to discover how well you are performing is through the monthly meeting as you never seem to get the opportunity of sitting down with your manager and talking about your work. You are also rather confused about the way your performance is measured - is it purely reflected in the departmental performance results? - you want this issue resolved at the meeting too. Your impression is that Malcolm is slow to praise and quick to criticise.

Your overall aim is, as far as possible, to resolve the issues you raise in the meeting. Make a note about how successful you have been in achieving your aim.

EXERCISE: MONTHLY MEETINGRole Brief: Supervisor - Harry Church

You are Harry Church, 43, and you have been working at Porky Products for 13 years, as a supervisor (9 years), a chargehand (2 years), and an operative (2 years). You are responsible for Department C, the meat preparation department, which consists of 45 operatives and three chargehands. You have no great ambition for yourself other than to achieve a good performance in your current role as a supervisor. Your relationship with John Taylor is very good and you have worked well together for 10 years. Graham Williams, however, is a very different case. You find he is a very ambitious younger man who, you feel, is a "yes man" and you find that annoying.

You are about to attend the regular monthly meeting with your manager, who is your immediate superior, and your fellow supervisors. These meetings have been introduced after much discussion between managers and supervisors and this is the third meeting since they started at the beginning of the year when your new manager, Malcolm Howe, arrived to take up his new position.

The way you view them, the monthly meetings are intended to improve the communication of information up and down the organisation. You feel this is a useful system if used correctly. Your own style of supervision you describe as "firm but fair" which you have always found to be the most effective style of supervising.

You wish to raise several issues at the meeting. They are:-

1. You are generally dissatisfied with the process and outcomes of previous meetings. You feel they have been "slanging matches", where the manager has hauled you

over the coals for not achieving targets he set for you. The original idea of the system of meetings seems to you to have been forgotten and you want Malcolm to make the meetings more useful as communications exercises.

2. You are also concerned with communication of another type. It appears that the shop floor operatives often have information before you do. You think this is happening when Malcolm comes on the floor and talks to the chargehand or the operatives directly. Although other managers and Malcolm keep telling you that you are part of the management team, you feel this is merely hot air. You want Malcolm to practise what he preaches and use the existing hierarchy when communicating, that is, pass information to you and you pass it on to your subordinates.
3. Closely allied to the previous point, you feel strongly that there is no reason for supervisors to feel part of management as they have no management "perks", little support from managers (particularly on disciplinary issues), and few management tasks. You feel more a member of a middle group, somewhere between the shop floor and management. You want to pass this data back to Malcolm in the meeting.

Your overall aim is, as far as possible, to resolve the issues you raise in the meeting. Make a note about how successful you have been in resolving the above issues.

APPENDIX 6PATCHEN MOTIVATION MEASURE.

The following four questionnaire items were used in the supervisor's questionnaire for the pilot study sample to collect data about job motivation. Respondents were required to tick the box next to the statement which most closely reflected their response to the questions.

1. On most days on your job, how often does time seem to drag for you?

(i) About half the day or more
(ii) About one-third of the day
(iii) About one-quarter of the day
(iv) About one-eighth of the day
(v) Time never seems to drag

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2. Some people are completely involved in their job - they are absorbed in it night and day. For others, their job is simply one of several interests. How involved do you feel in your job?

(i) Very little involved; my other interests are more absorbing
(ii) Slightly involved
(iii) Moderately involved; my job and my other interests are equally absorbing to me
(iv) Strongly involved
(v) Very strongly involved; my work is the most absorbing interest in my life

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3. How often do you do some extra work for your job which isn't really required of you?

(i) About once a month or less
(ii) Once every few weeks

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- (iii) About once a week
- (iv) Several times a week
- (v) Almost every day

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4. Would you say you work harder, less hard, or about the same as other people doing your type of work in the company?

- (i) Much less hard than most others
- (ii) A little less hard than most others
- (iii) About the same as most others
- (iv) A little harder than most others
- (v) Much harder than most others

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The scores assigned to each response are as follows:-

- (i) - 1
- (ii) - 2
- (iii) - 3
- (iv) - 4
- (v) - 5

Total scores for the variable were determined by summation of the scores on each item.

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